MAGAZINE OF BUILDING

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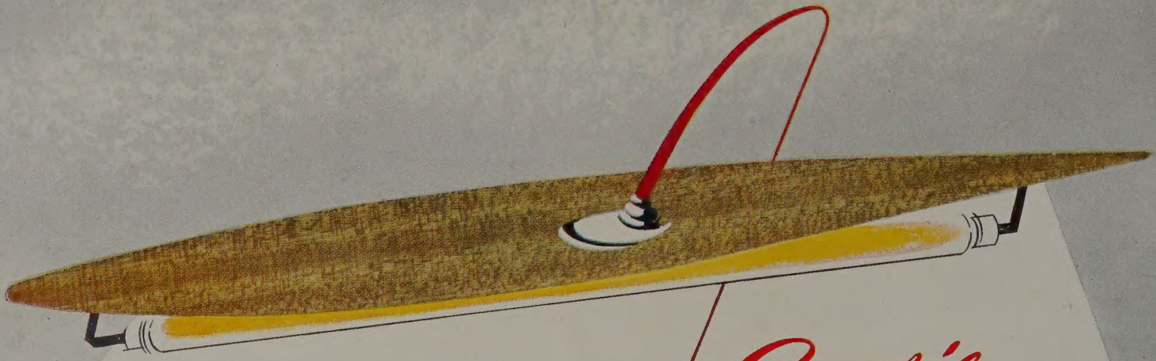
August 1952

house+home

edition

Editorial	The mortgage mess, or sold for a mess of potage (p. 73)
Architects turn builders	And give distinction to some fresh ideas (p. 88)
Modernization	Are today's builder's houses ready for remodeling already (p. 80)
Minimum space	Within a lavish showplace, Neutra develops a 20'x20' working-cooking-eating-living area as compact as any builder's house (p. 74 and below)
Expendable mortgage	US Savings & Loan League urges all members to adopt new plan to finance home improvements (p. 71)
Panel prefab	Small builder cuts framing costs 20% by avoiding usual mistakes (News)
Elegance at $10 a sq.ft.	Two houses by Craig Elwood (p. 96)



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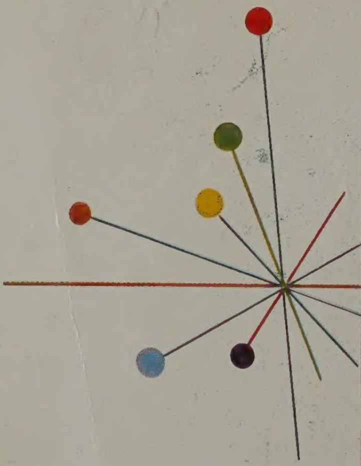

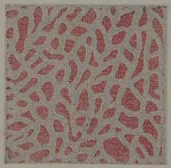

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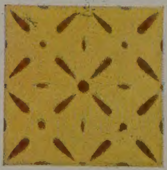

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THE MAGAZINE OF BUILDING **house+home** edition

August, 1952

Published by TIME Incorporated

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THE MAGAZINE OF BUILDING
ARCHITECTURAL FORUM Edition
and
THE MAGAZINE OF BUILDING
HOUSE & HOME Edition

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Cover: House by Richard Neutra; photo by Julius Shulman

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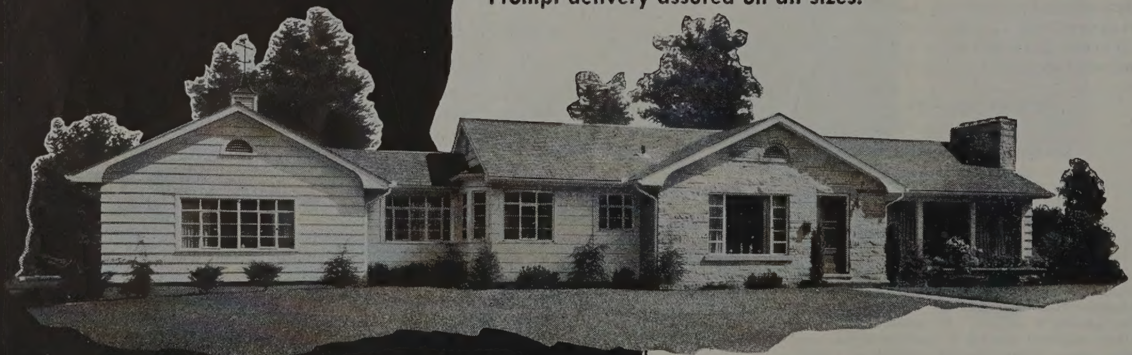

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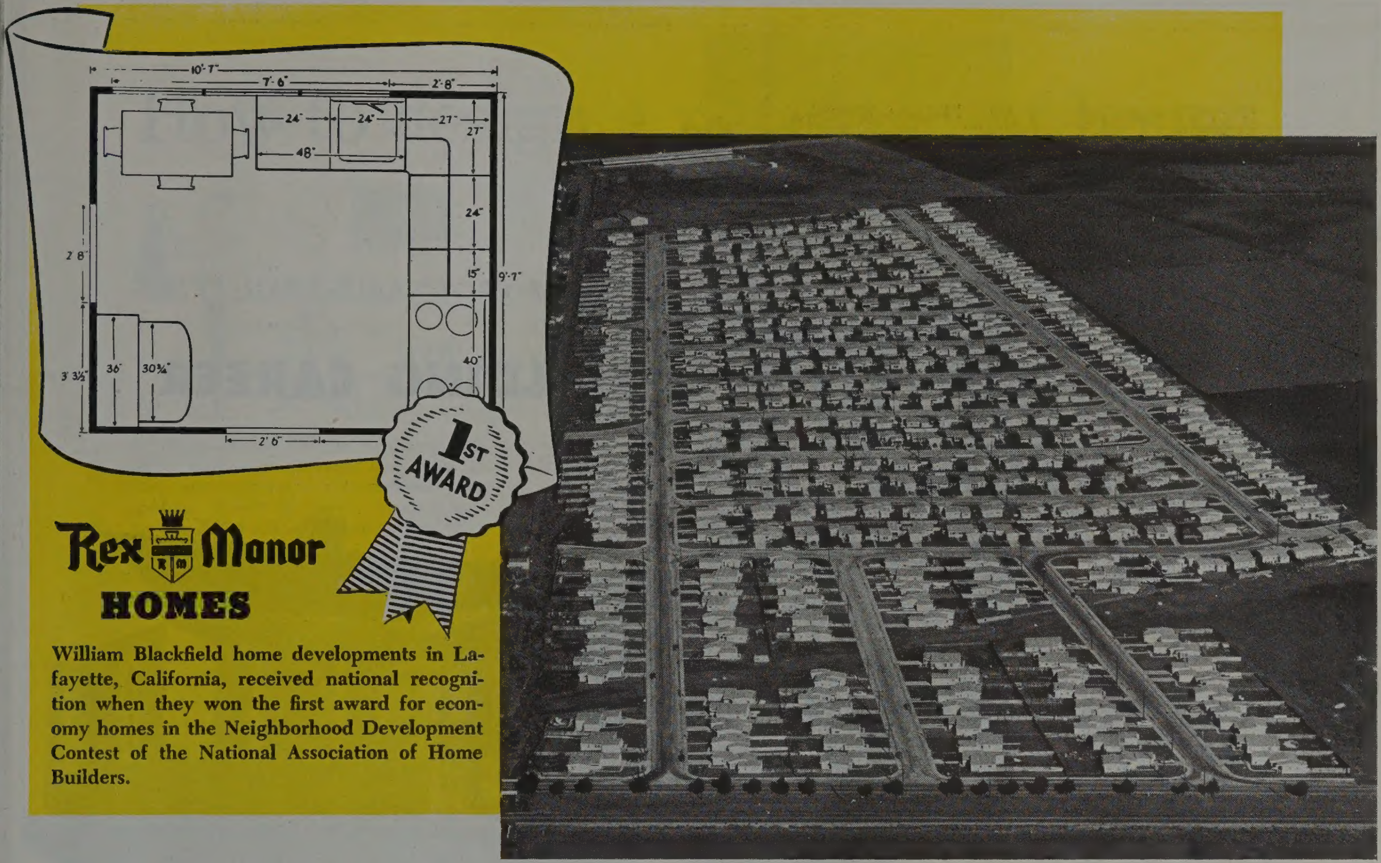

Rex Manor HOMES

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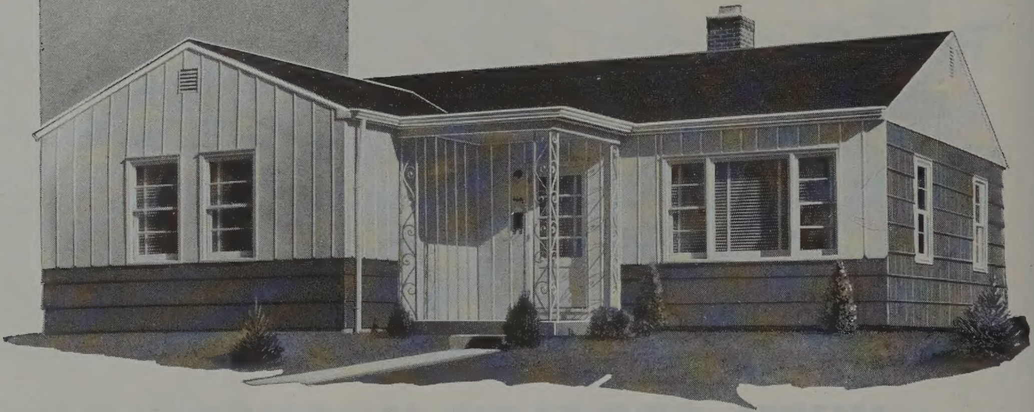

Pictured is Plan No. 9 in the Pease-Fabricated line of homes. This L-shaped design ranks high in popularity. Has a floor area of 1084 square feet. Contains 3 bedrooms, living room, kitchen, bath and utility room.

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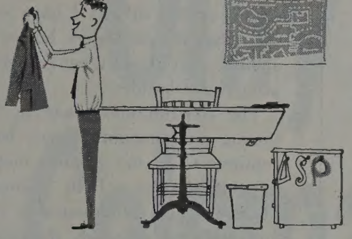
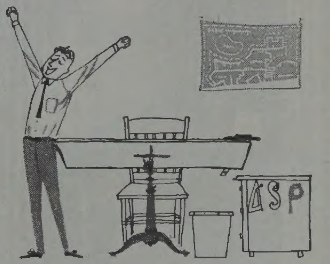
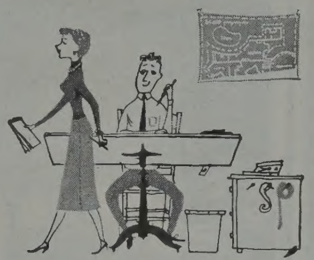
How to design a new kind of house



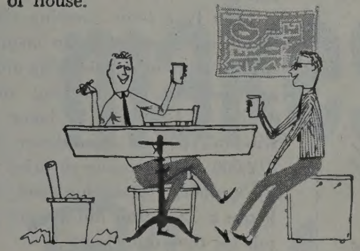
1. Start with the Carrier Weathermaker Air Conditioner. It heats and cools. It uses ducts similar to a forced warm air system. It will fit in any house — new or old. But it makes possible a new kind of house.



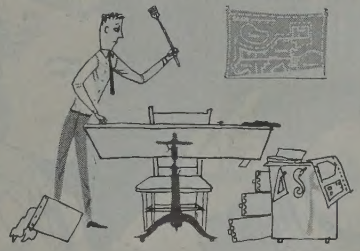
2. Forget the usual restrictions and problems of ventilation and temperature control. You are working on a Carrier Weathermaker Home. And it's completely air conditioned.



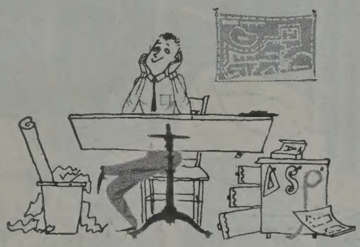
3. Shape your floor plan in an economical rectangle. You don't need wings or jogs to get cross-ventilation.



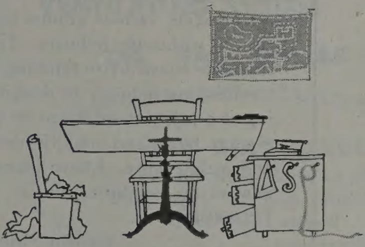
4. Group your windows for a feeling of space. Place them high on the wall for better lighting or easier furniture arrangement. Make them big for a good view. Leave them off where the view is poor or you want privacy.



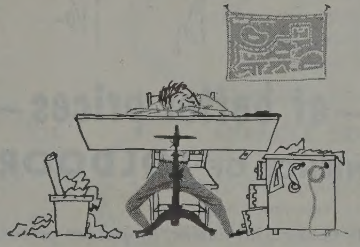
5. Eliminate screens, movable sash and removable storm windows. Specify most glass double-glazed, set in simple frames.



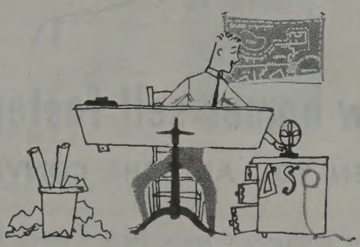
6. Plan the interior for convenience without restriction. Put walls, windows and doors where they function best. This is a Weathermaker Home . . . not a wind tunnel.



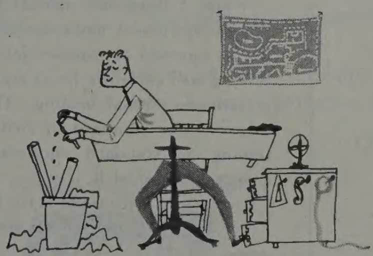
7. Use interior bathrooms. You'll save valuable perimeter space and a window probably nobody would be able to look out of anyway.



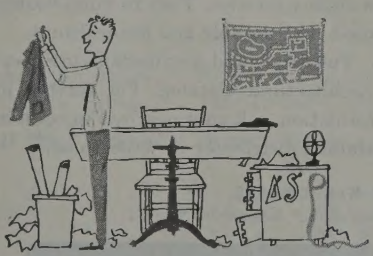
8. Set the Carrier Weathermaker Air Conditioner anywhere that suits your plan — closet, utility room, basement, attic, even the garage. The Weathermaker fits in a space only 5′ 3″ x 4′ 5″.



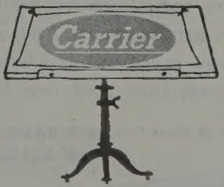
9. Banish from your mind and the Weathermaker Home all the old-fashioned halfway measures to halfway comfort: fans, attic fans, louvers next to big windows and porches.



10. Trim your plans to take advantage of the climate. Proper exposures, well-planned overhangs and well-placed shade trees will make the house easier to cool, easier to heat.



11. Wind up with some real savings. And a house that's cleaner, quieter, more private, more comfortable and more fun to live in. If you'd like to hear more, our Weathermaker Home booklet is free for the writing.

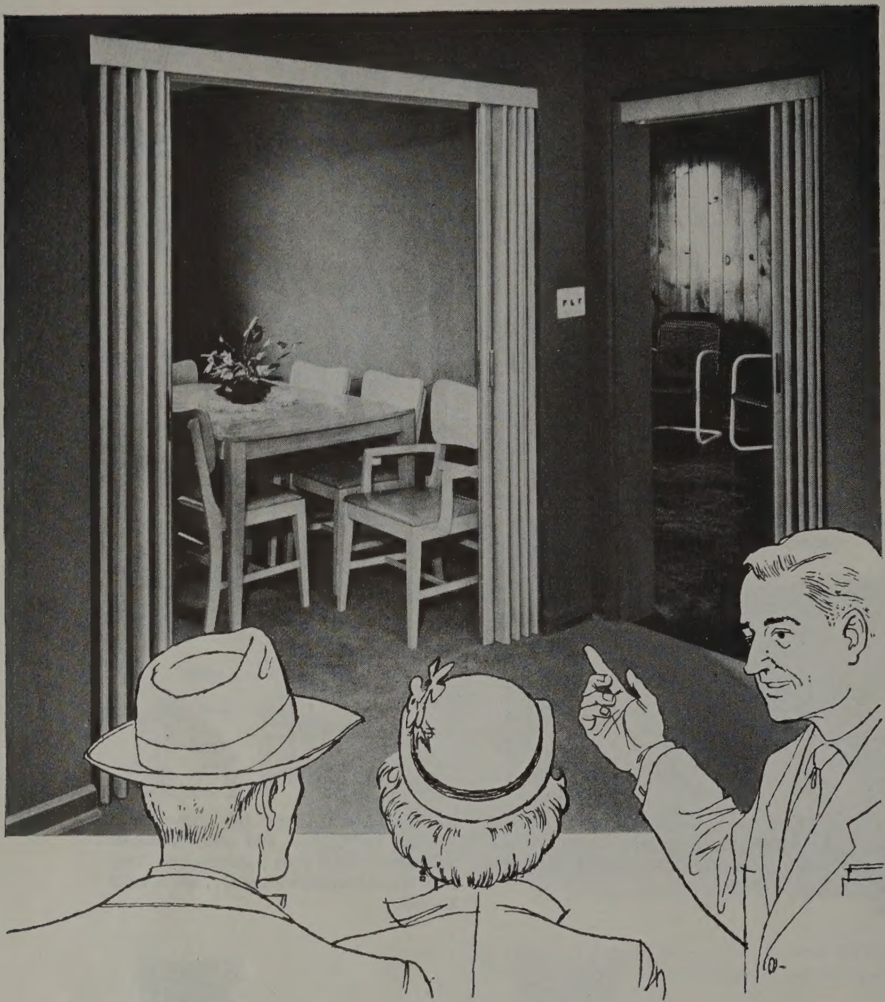


12. CARRIER CORPORATION
313 S. Geddes Street, Syracuse, New York

Send me "How to Have a Weathermaker Home"

*Name*____________________

*Address*____________________



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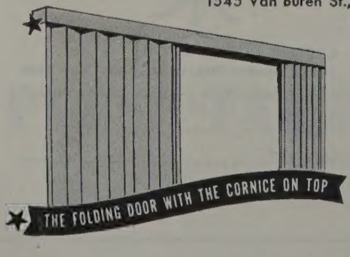
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LETTERS

AIR CONDITIONING

Sirs:

In my opinion your article on air conditioning (H&H, June '52) is one of the finest news stories on the subject I have seen. Air conditioning in speculative homes is becoming another service and convenience offered by progressive builders.

The contributions made by the air-conditioning unit manufacturers have and will continue to be the greatest factor in the use of this facility. Both manufacturer and builder benefit immeasurably reputationwise and sales are definitely increased where air-conditioning units are installed.

FRANK J. ZUZAK, *Builder*
Shreveport, La.

Sirs:

Your June issue covering air conditioning and heating served as an inspiration for our firm to reorient our thinking along those lines and we are now offering advertising and selling a 1,000 sq. ft. house with a 1-ton window-type air conditioner for less than $12,000. Much to our surprise we found that by properly designing and orienting our house a 1-ton unit did a more than adequate job for the entire house.

FONDE-BARTLING CONSTRUCTION CO.
Knoxville, Tenn.

Sirs:

Yours is the most informative article of its kind I have read. You are to be commended for bringing various groups together for discussion within the industry. Your article will stimulate constructive thinking within the air-conditioning industry to design air conditioning at a price where it can be installed in the average home and simplify design, operation and maintenance. I have plans on the board now to air condition all my houses in the $12,000 bracket.

GEORGE GOODYEAR, *Builder*
Charlotte, N. C.

Sirs:

Your air-conditioning article was another fine service to the building industry.

While I think the manufacturer needs to design equipment more specifically for housing as opposed to commercial use, air conditioning will certainly be as standard in many sections as central heating. This article will improve our standard of living. Air conditioning as standard equipment will come sooner because of it.

RICHARD HAIL BROWN, *Builder*
Birmingham, Ala.

Sirs:

Your stimulating thoughts on air conditioning covered the field so thoroughly that they enabled me to make plans for my own homes. In other words, you set up square-footage measures in relation to required tonnage of plants for houses.

(Continued on page 38)

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REVOLUTIONARY HEATING AND VENTILATING SYSTEM

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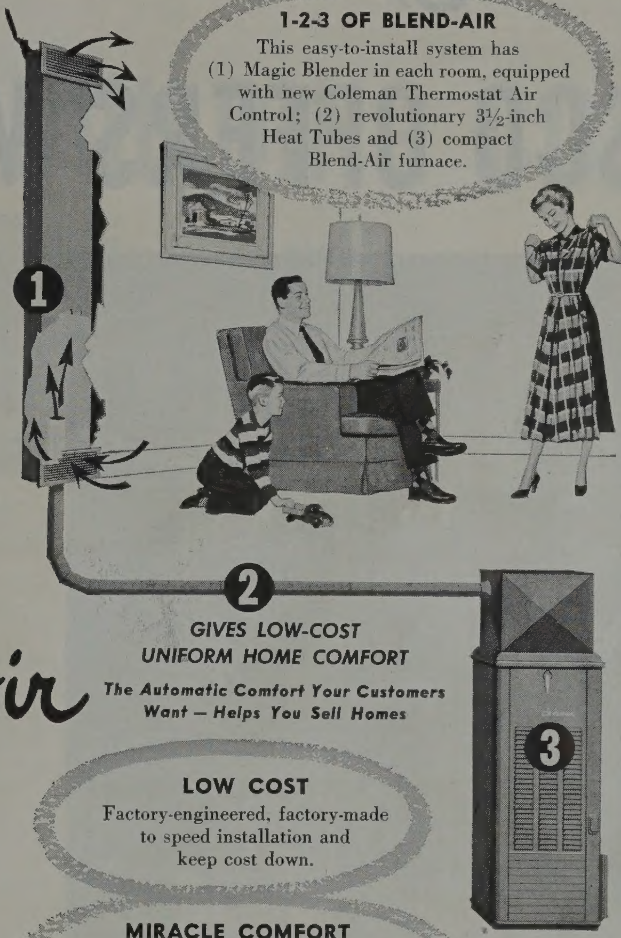

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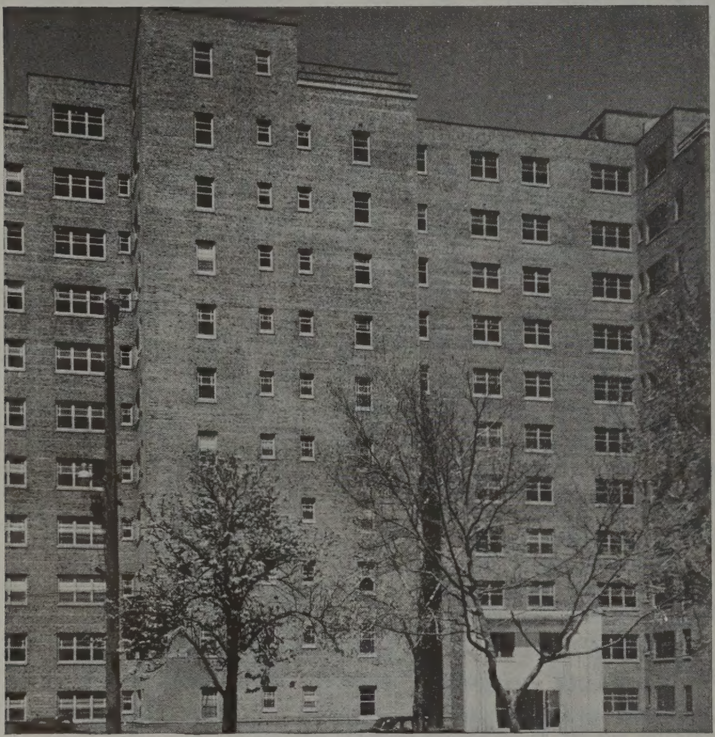
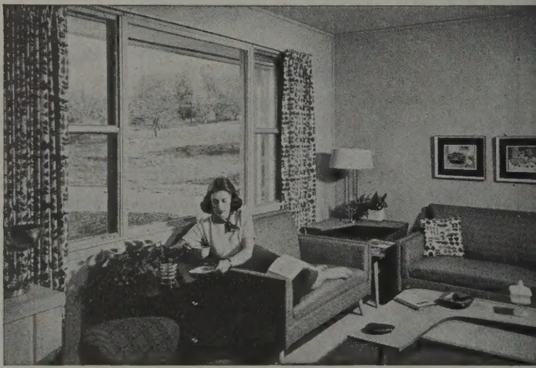


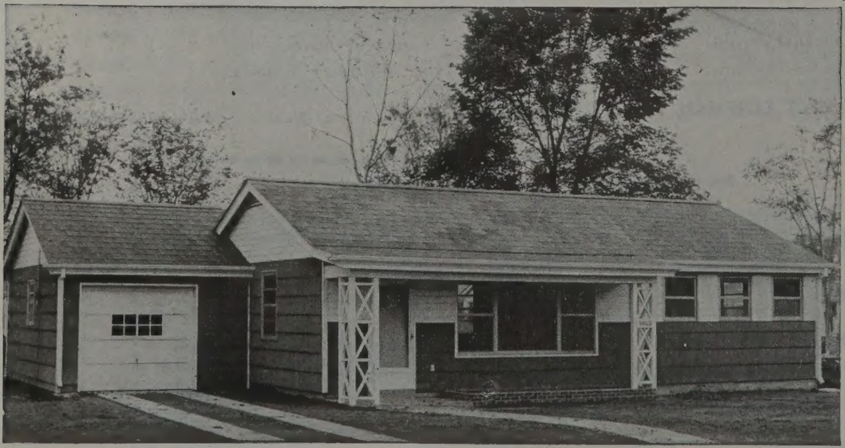
EDGEWATER TOWERS, LAKEWOOD, OHIO

Rusco Prime Windows are used throughout this superbly-appointed, 11-story luxury apartment on the shores of Lake Erie. Apartment has 205 suites, with 1668 windows. ARCHITECT AND BUILDER: THE BYRNE ORGANIZATION, WASHINGTON, D. C.

SPEED OF INSTALLATION AND OTHER COST SAVINGS

have resulted in choice of Rusco Prime Windows for P & H Prefabricated Homes, Port Washington, Wisconsin. Exterior view above, interior view below.





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INSULATING SASH*

WOOD OR METAL CASING

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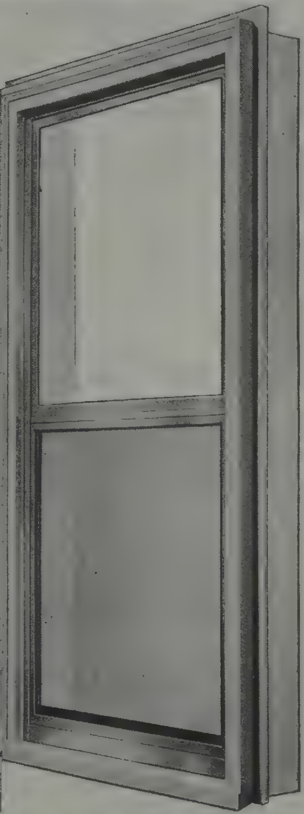

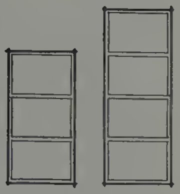
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All Chambers "Built-ins" have been accepted by FHA for underwriting loan. Designed for all kinds of gas . . . city, bottled, or tank. Backed by World Famous Cooking Performance and strong national advertising, Chambers "Built-ins" are *easy* to sell . . . *right* to use. . . . *smart* to own. *They make the kitchen sell the home!*

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Kitchen Maid, Andrews, Ind.
Lyon, Aurora, Ill.
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St. Charles, St. Charles, Ill.
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BUILDERS—DEALERS—ARCHITECTS
GET COMPLETE DETAILS TODAY!

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MAIL COUPON FOR MORE INFORMATION

Chambers Corp., Dept. AFT852, Shelbyville, Ind.
☐ Please send me A.I.A. Specification Sheet for Chambers Built-Ins.
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CITY.................... ZONE.... STATE......

IN-A-TOP "Drop-in" Burner

ON-A-TOP 4 Burner Unit

LETTERS

In Memphis we grew so fast during the war that our power company has not been able to keep up with 3-phase electric power and our city code requires 3-phase power for air-conditioning units in excess of 2-tons. This is why more progress has not been made here.

However, your article has stirred up tremendous interest and I know of several builders who are going forward with air-conditioning plans—about 75 units contemplated subject to city getting 3-phase current.

I have plans for installing air conditioning in ten units in my $20.000 to $27.500 houses. The other 65 units are to cost $12.000 to $15.000. In each of these it is planned to air condition the entire house.

In my opinion air conditioning will soon be a *must* in new housing. What we need is a more economical unit that will operate without water. The average 3-ton unit installed in Memphis will cost $1.150 to $1.200.

Chester Camp, *President*
NAHB
Memphis, Tenn.

Sirs:

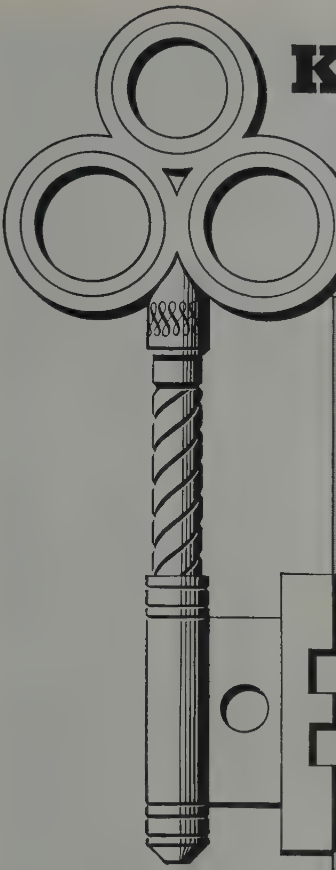
What the air-conditioning industry needs most if it wants to crack the homebuilding market is more five-room-and-bath minds. And its engineers would do well to take a sabbatical year with a developer, working from the raw acreage through the individual house sale.

The engineer's greatest finding will be: only six basic plans are being used and bought by the public. Carl Boester makes the point: no one is going to "give" the air conditioner $600 to $1.000 worth of space for the privilege of paying a good price for the equipment. "When the dishwasher goes in, some of the hanging cabinets go out." In each of these basic plans he will find there is little-used cubage he can safely ask the builder to let him use for his equipment. (No builder in his right mind will give him $600 worth of pure space for the privilege of paying a stiff price for his equipment.) Usually the best place to look for that space will be near the plumbing in kitchen, bath, and utility room, in the dropped ceiling of the bedroom hall, or in the low-pitched attic above.

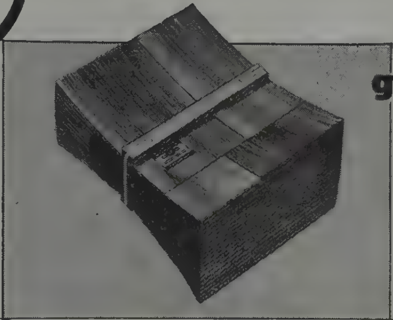
Or if the bathtub is at right angles and adjacent to an outside wall (which seldom contains pipes or wiring) and under a dropped ceiling, the wall can be deepened to take equipment without great difficulty. Tub under the window? Look at the closet on the adjacent wall for unused head space. Or in a 1,100–1,300 sq. ft. house where the kitchen is bound to be fairly close to the bedrooms, he could capitalize on a dropped ceiling over the cabinets or service area. According to the pitch of the roof, the attic is the most usable area.

We used analysis like this in considering an evaporative cooler in which pads were exposed to atmosphere in a shaft 14″ wide, 8′ high with pan and pump at the bottom,

(Continued on page 42)



Key to your guarantee of Quality Roofs and Walls



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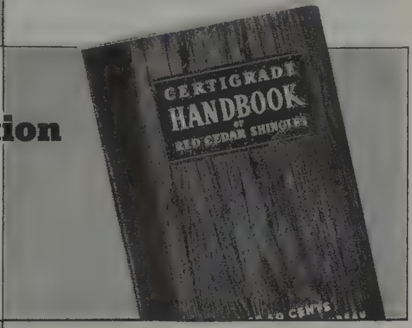
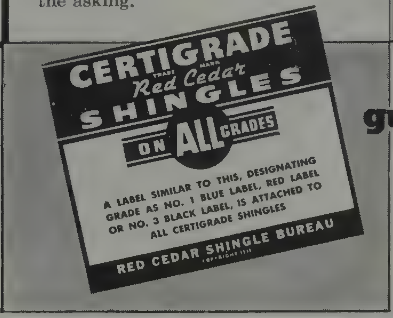
Builders, lumber dealers and architects know that *genuine cedar* shingle roofs and walls give longer service *per-dollar-of-cost* than any other material available.

correct application

The Certigrade Handbook has helped thousands of builders to be *positive* that they are giving their customers perfect shingle application. The 100-page "Handbook" is yours free for the asking.





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SHINGLES
ON ALL GRADES
A LABEL SIMILAR TO THIS, DESIGNATING GRADE AS NO. 1 BLUE LABEL, RED LABEL OR NO. 3 BLACK LABEL, IS ATTACHED TO ALL CERTIGRADE SHINGLES
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When you sell Certigrade cedar shingles—or when you *build* with Certigrades—following the time-tested methods of application demonstrated in the Certigrade Handbook, you are assured that you are winning customer confidence by providing the utmost in satisfaction at the most reasonable cost.

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"Permits carpet magic — wall to wall"
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...if you want to see the heating element

You won't see any finned pipe heating element once you put in Dunham Baseboard. You know it's there, of course, by the way it performs.

But, once installed, Dunham Baseboard shows only straight, smooth, unbroken horizontal lines . . . no heating fins, no pipe, no piping connections are visible through air openings.

Dunham's unique, one-piece, smooth-surfaced front cover is easy to clean. Since it extends clear to the floor, there's no "cleaning under" problem, either.

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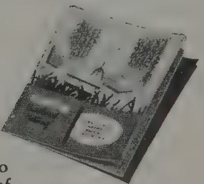

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NEW
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. . . and do it safely!

This revolutionary tool attaches steel or wood structural pieces to concrete or steel surfaces in seconds . . . cuts costs and working time on construction jobs. Completely self-powered, the Stud Driver sets as high as 5 studs per minute . . . with no outside power source or other equipment required. And this rugged tool is built to last, yet weighs only 5½ lbs.

Test-proved to be the world's finest and speediest fastening system, the Model 450 Remington Stud Driver is made by Remington Arms Company, Inc., *America's oldest and foremost sporting arms manufacturer.*

Read the facts on the amazing pull-out resistances of Remington studs in tests conducted by the United States Testing Co. Send in the coupon below for your free copy of this informative report.

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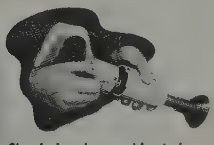
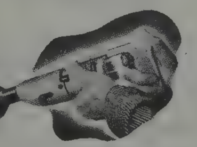
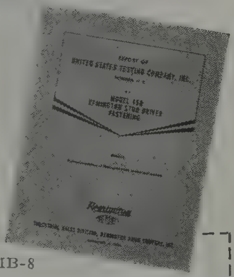


Simply hand-assemble stud and power cartridge, load as a unit in easy-to-open Remington Stud Driver, and close.



Press loaded Stud Driver firmly against surface, depress safety lever and pull trigger. Explosive charge imbeds stud solidly.

Listed and approved by Underwriters' Laboratories



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for Industrial Floor Areas

FOR OIL RESISTANCE

Oil and Grease abuse are part and parcel of practically every industrial operation. Any floor used in manufacturing establishments should be able to resist commonly used machine lubricants. DURACO does this well.

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Tools and machines are hard on floors. DURACO is made with high impact resistance and stands up well under the dropping of heavy objects—a virtue all-important in machine shops.

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DURACO's smooth, dense surface resists the wearing-in of grime—makes cleaning simple and fast.

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"Azrock Makes Fine Floors"

LETTERS

blower in one of several areas available in the average plan, at the top.

Any operative builder relies on some form of financing, bank, insurance, FHA. He must meet federal, state and county codes. Any equipment he installs must be reviewed with these in mind. Any air-conditioning salesman worth his salt must know the *minimum* requirements of his product. He can not expect the busy developer to do his missionary work with the various agencies influencing his money and his property.

And please, boys, don't design our houses for us! Just take what we're doing and work into it.

Jules F. Reither
Professional Drafting Service
Sacramento, Calif.

Sirs:

Have read with much interest in June House & Home about residential air conditioning in the United States, including your round table on the same.

No doubt about air conditioning becoming an integral part of the house—like the bathroom. Installed air conditioning is, or will be shortly, as essential as "inside" plumbing.

Your round table gave the builders' needs —it is now up to the manufacturers to supply air-conditioning units at the right prices. This, we know, is possible through American industrial "know-how." It is not forthcoming immediately, the manufacturers alone must shoulder the blame . . . because it is sometimes considered "unprofitable" (immediately) by big business (manufacturers) who profit unduly by keeping unit costs up and stifle progressive ingenuity with resulting benefits.

Mackie & Kamrath, *Architects*
Houston, Tex.

Sirs:

The special section on residential air conditioning (H&H, June '52) is truly outstanding and should be of substantial benefit to our industry.

S. J. Levine, *Gen. Mgr.*
General Electric Co.
Bloomfield, N. J.

Sirs:

Have you ever made a study of adobe as used in the construction of the original houses in Santa Fe and throughout the southwest? Adobe ties in nicely with your issue devoted to air conditioning (H&H, June '52), "Cool in summer, warm in winter" is what the natives claim for its 10, 12 and 14—and more!—inch blocks. There would seem to be the germ of an idea in there some place.

William L. Klug
Santa Fe, N. M.

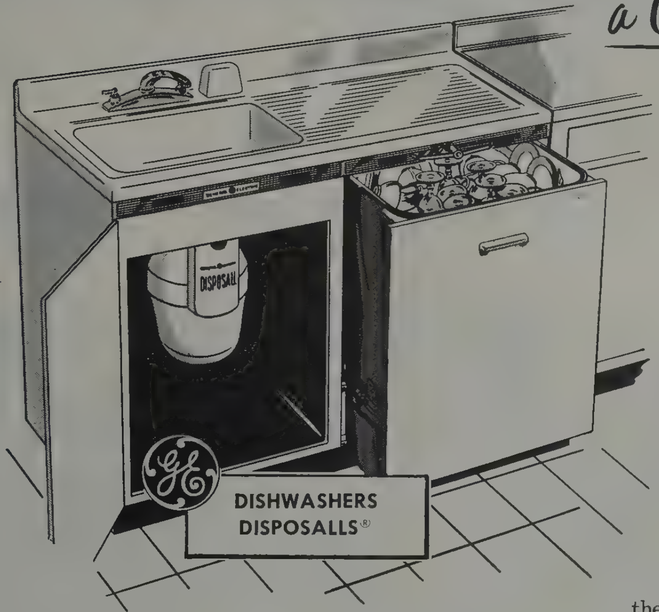
Sirs:

In the article on electric heat (H&H, June '52) you say "Ceilings are required to have at least 4″ of insulation (not reflective) with

(Continued on page 46)

This is a fine house.

This is the same house . . . with a G-E Electric Sink installed!



And these two "Top Salesmen" make the difference!

And here's why . . .

To home buyers, the kitchen is most often the difference between just a "fine" house . . . and the house they would *really* like to buy! Timesaving, laborsaving kitchen appliances are way up on the list of "musts" for the modern house-hunter. And that's the reason houses with General Electric Dishwashers and Disposalls sell faster.

When you install the G-E Electric Sink, you give your homes those modern "extra-plus" features that mean *more sales-appeal* over other houses selling in the same price range!

By designing your kitchen with the General Electric Dishwasher and Disposall *in mind,* the actual installation cost *to you* is very little more, and . . .

The cost to you of the G-E Sink is included right in the selling price of the house.

And it's a break for your prospective buyers, too . . . because by using the long-term Package Mortgage, they are offered these modern kitchen appliances for only a few dollars extra a month!

To maintain the design and balance of your kitchen, be sure to specify and install the strong, roomy G-E Cabinets that are modern, matching kitchen equipment.

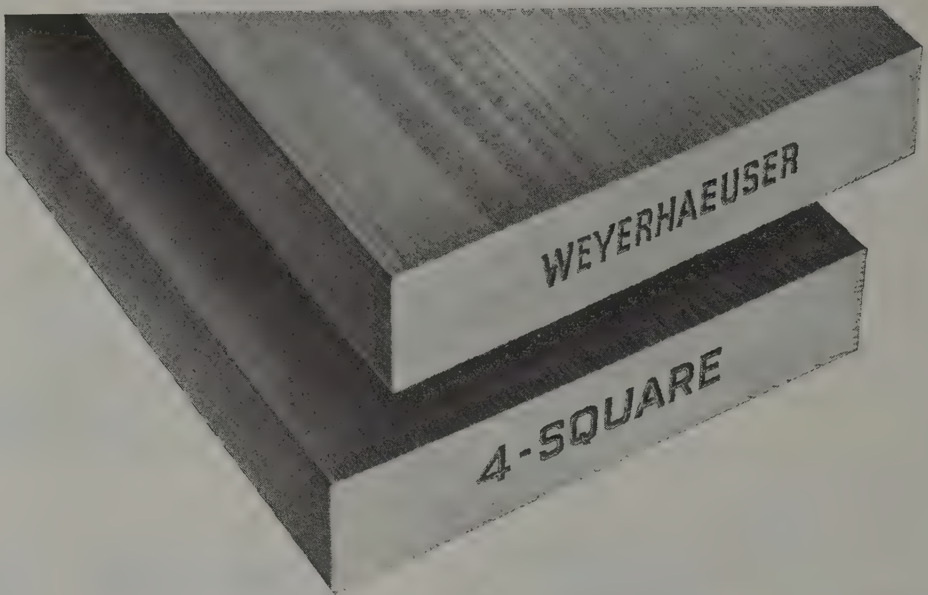
Always make it General Electric! Surveys show that 53 out of every 100 people prefer G-E appliances over all other brands! Buyers look for the name General Electric . . . it's their sign of dependability!

Note to Architects and Builders —

A General Electric Disposall can be installed in any kitchen sink! It is specially designed for use with septic tanks, too. Actually helps keep drain lines clean!

Your nearest G-E Major Appliance distributor will gladly discuss costs and kitchen plans with you. The G-E Kitchen Planning Service can help you design bigger, faster sales into your homes! General Electric Company, Louisville 2, Kentucky.

GENERAL ELECTRIC



THIS BRAND NAME ON LUMBER MEANS . . .

SCHOOLDAYS are never over for a good lumberman. Here instructor points out important facts concerning lumber and its handling.

THERE'S A RIGHT and a wrong way to plant trees. This man knows the right way because of training in the proper handling of seedlings.

"PIANO PLAYER" this man is called. He operates a team of high speed saws, individually controlled from the "keyboard."

Good Lumber... *produced by* Trained Personnel

How many feet of clear lumber can be obtained from a 40 foot Douglas Fir log?

The answer to that question depends in part on the skill, the training, the experience of many different men doing many different jobs. Each log must be appraised as an individual problem by men with the know-how needed to get the most out of it, with the least waste and in the least amount of time.

In a Weyerhaeuser mill, for example, a single man, the head sawyer, makes thousands of decisions in a single day . . . determining where and how to cut to secure the greatest yield of good lumber from every log. This is just one example of why Weyerhaeuser places such emphasis on getting the best men in the industry for each of the many dozens of highly technical operations necessary to the job of producing high quality Weyerhaeuser 4-Square Lumber.

In addition to the selection of top personnel, Weyerhaeuser conducts a broad program of training designed to sharpen the skills and aptitudes of its men to the utmost.

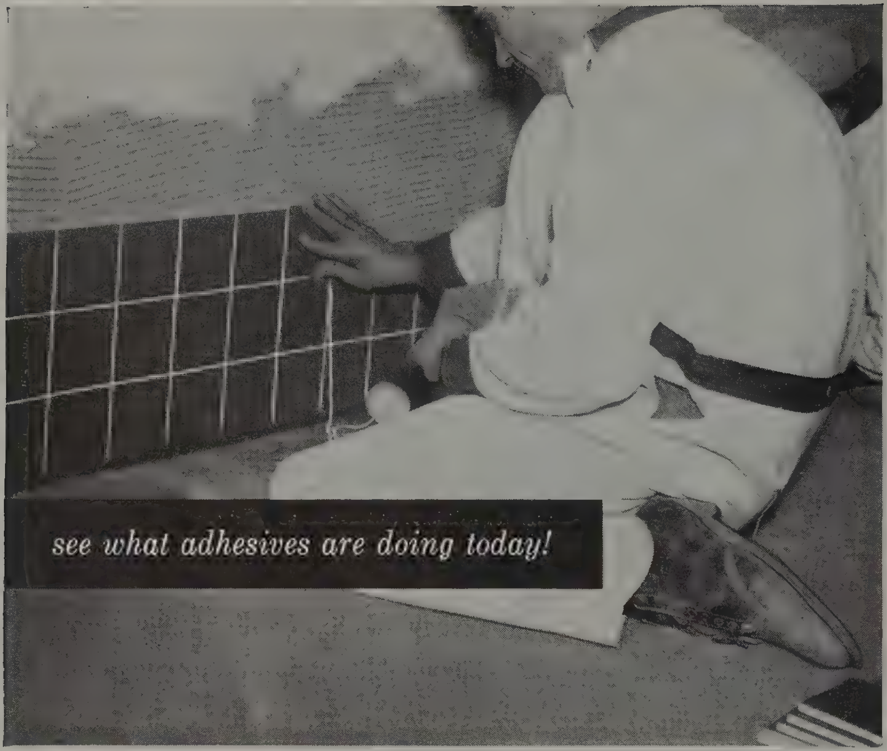
Add together all the men who contribute to the quality of the finished product . . . the fellers, scalers, hookers, loaders, buckers, crane and bulldozer operators, linemen and section hands . . . everyone from brush monkey to mill mechanic . . . and you will get some idea of the army of technicians needed to make that famous brand, "Weyerhaeuser 4-Square" mean greater lumber value to you.

The Coos Bay, Oregon, Mill

At mills located on the West Coast and Inland Empire, Weyerhaeuser 4-Square Lumber is produced in a range of products from Douglas Fir, Idaho White Pine, Ponderosa Pine, West Coast Hemlock, Western Red Cedar and related species.

Weyerhaeuser 4-Square Lumber and Services

WEYERHAEUSER SALES COMPANY • ST. PAUL 1, MINNESOTA


see what adhesives are doing today!

Setting tile in thrifty style

Look *behind* clay tile for the big news in construction methods today! 3M Ceramic Tile Adhesive is showing builders how to set tile faster . . . at less cost!

In new homes, builders find they can build "dry wall"—eliminating heavy mortar and steel lath—and get a clay tile job with 3M mastic that will last a lifetime. Remodeling jobs are simplified because 3M Ceramic Tile Adhesive eliminates rebuilding walls. Tile can be easily and rapidly set on existing surface.

3M Ceramic Tile Adhesive is tough, resilient and durable, resisting cracks, moisture and settling. It is clean and easy to handle. Reports from all types of building jobs show it can *cut costs up to 20%* on tile setting.

FIFTIETH ANNIVERSARY 3M COMPANY 1902 ★ 1952

FREE SPECIFICATION AND DATA SHEETS:

Whether you are a builder, architect or tile contractor, 3M Ceramic Tile Adhesive is money-making news to you. Write 3M, Dept. 148, 411 Piquette Ave., Detroit 2, Michigan, for latest information.

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MAKERS OF "SCOTCH" • BRAND PRESSURE-SENSITIVE ADHESIVE TAPES • "SCOTCH" BRAND SOUND RECORDING TAPE • "SCOTCHLITE" BRAND REFLECTIVE SHEETINGS • "3M" ABRASIVE PAPER AND CLOTH • "3M" ADHESIVES AND COATINGS • "3M" ROOFING GRANULES • "3M" CHEMICALS

a U factor of .07 or less. . . ." Thus you give the impression that manufacturers of electrical heating equipment as a whole condemn reflective insulation. This is just not so. . . .

As a refrigeration and air-conditioning engineer, I think you did a very good nontechnical job on air conditioning in the same issue.

I have found that architects besieged by insulation salesmen, are so confused by conflicting claims about K, R, C, U, vapor permeability, convection, conduction, radiation direction of heat flow, ad nauseum, that they frequently end up giving the client an expensive, grief filled, water logged, paint peeling, heat hog of a monstrosity called a modern home.

To my mind anyone concerned with heating or cooling, would be well advised to disregard manufacturer's ratings on insulation. Generally, they reflect the most favorable laboratory test of a series. Rather, take in use tests, of some impartial authority.

ART DE DESROCHERS
Commercial Refrigeration
Wenatchee, Wash.

H&H perhaps did not make plain that the only objection to metallic insulation is using it *above* electric ceiling panels. The foil tends to pick up an induced charge that could leap to the house wiring system and light up bulbs like the Aurora Borealis. Its use elsewhere (walls and floors) is unlimited.—ED.

REG. X

Sirs:

I can imagine nothing more confusing for the building industry than this scheme for turning Regulation X off and on.

It takes many months to plan a subdivision, and good planning and design must aim at a definite market and income bracket. Obviously a developer can be completely "snafued" if he finds the market for which he planned is upset by a switch in Regulation X. If the government's purpose is to discourage private enterprise, this sort of thing will bear real results.

DAVID D. BOHANNON ORGANIZATION
859 San Mateo Drive
San Mateo, Calif.

PACKAGE MORTGAGE

Sirs:

I have had the pleasure of working for the past four or five years on the package mortgage, and certainly no magazine in the country has had more to do with gaining acceptance for this type of financing. You and your organization are to be congratulated on continuing this work. It already has and should continue to prove most valuable not only to builders but also to the appliance manufacturers and distributors. I hope that you will continue your sponsorship of this fine program.

I. P. PRUITT, *Mgr. Marketing Services*
Appliances and Electronics
General Electric Supply Corp.
Bridgeport, Conn.

Steel shortage will be brief; big boost in CMP copper, aluminum

While the steel strike was on, building barely felt its effects. Now that it was over, a pinch was clearly in sight. Fortunately, the shortage promised to be relatively short. DPAdministrator Henry Fowler hoped steel would be back to normalcy again by next March.

As DPA began spelling out building's poststrike future, homebuilders could take comfort from the fact that they would be the least hurt segment of private construction. Despite the strike loss of 20 million tons of steel—a fifth of last year's production—controllers had no plans to reduce self-certifiable limits on steel under CMP. Moreover, DPA was ready to order big increases in self-certifiable limits on copper and aluminum.

It was an ironic reversal. Even three months ago, mobilizers were crying that copper shortages would be with the nation for months if not years. Last month, a top NPA construction official declared flatly: "Copper is no longer a limiting factor in materials allocations for building."

For 1- to 4-family houses, DPA had plans to raise nearly tenfold the self-certifiable limit of copper:

	Old	New
With copper water pipe	135 lbs.	1,000 lbs.
Without copper water pipe	35 lbs.	900 lbs.

For aluminum, the controllers would raise the self-certification ceiling from zero to 275 lbs. per house.

More for B products. DPAides said there would be "corresponding" improvements in copper and aluminum supplies for class-B products such as plumbing, hardware and aluminum windows. Even on most class-B products made chiefly of steel—such as stoves, refrigerators, hot-water heaters and bathtubs—supplies on hand looked adequate to match housing production. Inventories of warm-air furnaces were at the second highest level in 5 years. Said NPA's John Haynes: "I can't see any trouble any place. There's enough in the pipelines so that if it's stretched a little it ought to do the job." Builders would face real trouble buying steel pipe (not in Haynes domain) at least for the rest of this year. But DPA hoped that pinch would be eased by its whopping increase in copper.

Commercial building. The new free-and-easy way with copper and aluminum would apply to commercial and industrial construction, too. Increases planned in self-certification limits on commercial building:

	per project per quarter Old	New
Copper	750 lbs.	1,000 lbs.
Aluminum	1,000 lbs.	2,000 lbs.

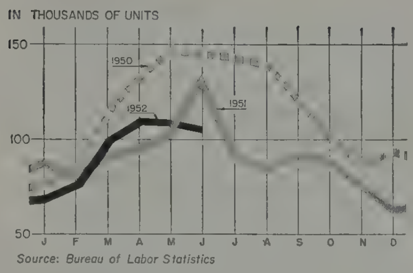
For industrial plants, DPA would raise the self-certification ceilings thus:

	per project per quarter Old	New
Copper	2,000 lbs.	5,000 lbs.
Aluminum	2,000 lbs.	4,000 lbs.

Squeeze or famine? In steel, controllers faced this picture: on April 1, steel inventories totaled about 17 million tons, about 3 million above normal. During April, May and June another 14 million product tons were produced, against an estimated 23 million tons consumption by August. Thus the 53-day strike pulled inventories down about 9 million tons and unbalanced stocks brought shutdowns among many steel users. The pinch was light on construction partly because NPA withheld allocations for all big new projects while the walkout lasted.

But it would take another six months to rebuild steel inventories. And most signs indicated that big building jobs requiring special NPA approval would bear the brunt of the fall and winter steel shortage. Commercial building might well become the chief whipping boy.

HOUSING STARTS



Source: Bureau of Labor Statistics

JUNE'S TOTAL of 106,000 housing starts gave the nation a first half production of 567,500, only 4% below the 1951 mark. Private starts for the first six months totaled 523,500, just 5,600 units below last year to the same time.

DPA Chief Fowler announced these plans:

To get military arms and construction started first, military orders for use through Nov. 30 would get a priority. Military orders for use through Oct. would get a superpriority. But third-quarter CMP tickets, normally invalid after Sept. 30, would be extended through Nov. Fourth-quarter tickets would be good through next Feb. Mills would be required to earmark a percentage of their output for AEC and armed-forces needs. Permitted inventory levels would be cut from 45 to 30 days.

No new starts. That means, said NPAides, that new starts on big building projects probably will be held close to zero until next year. But they hope that buildings already underway can keep building. One plan called for fourth-quarter allocations cut only 20% from third-quarter levels. The promised July 1 relaxation on commercial construction and the end to the ban on recreational building would be pushed well into the first quarter of 1953.

5% down payments expected by mid-Sept. as housing starts count begins with June

Even if Regulation X is relaxed, builders still faced some hurdles before 5% down payments would become a reality. The unwieldly provisions of the Defense Production Act (H&H, July '52, p. 35) force the government to ease credit curbs to 5% if housing starts sink below a 1.2 million a year rate for three months in a row. But the law stopped right there. FHA and VA would still be bound by down payments spelled out in earlier legislation. VA thus could approve some loans with nothing down but closing costs. But only a few FHA insurance titles permit a 95% loan. Bulk of FHA's regular program, under Sec. 203, would permit only 80% loans. And conventional lenders almost never lend more than 80%, often stop at 60 or 67%.

FHA amenable. Still it was good news to builders when FHA officials indicated at month's end that the insuring agency would surely relax its own rules (up to the legal limits) in conformity with any Reg. X relaxation ordered by the Fed. Builders of high bracket homes could then rely on conventional financing, with second mortgages, to keep down payments near the 5% mark.

New job, old faces. President Truman spelled out how the new mechanism will work in executive order 10.373. As anticipated, the widely respected Bureau of Labor Statistics got the job of estimating the starts, which it has been doing anyway for the last 32 years. Ordinarily, BLS reports the raw figures on housing, unadjusted for winter's lull and summer's building peak. Its experts went into a huddle to figure out a formula for seasonal adjustments, announced they will have no answers before the end of this month.

Why mid-September? Most importantly, Truman ordered the three-month count to begin with June. That meant credit curbs must be lifted by Oct. 1 if June, July and August show a seasonally adjusted rate below 1.2 million starts. And the Federal Reserve, given the authority to announce the relaxation with HHFA concurrence, indicated it saw no purpose in waiting until Oct. 1 if the June–August figures came in before then. Ordinarily, the BLS report would be ready by Sept. 12 or 15. So this became a good target date for the good news homebuilders were waiting to hear. Both agencies denied an Associated Press report that they might ease controls any sooner.

How to sell a house meantime, while buyers awaited the virtual certainty of better terms, remained a tough problem. NAHB suggested one possibility: because credit-control rules apply at the time of the actual title transfer, builders should get a lawyer to insert an appropriate provision in initial sales contracts. "Be sure," warned NAHB, "that the local FHA and the lender will approve the higher mortgage."

Budget bureau refuses BLS funds to speed housing starts count controlling credit terms

The Bureau of Labor Statistics' preliminary monthly estimate of US housing starts—only figure of its kind regularly compiled in the nation—acquired a new importance to homebuilders last month. The government will rely on BLS findings to determine whether housing starts sink below an annual rate of 1.2 million, thus compelling relaxation of Regulation X.

How good a yardstick? The big question was: how accurate were BLS' housing figures? BLS men insisted they are as accurate as they can be considering the money the bureau has available. No one disputed them. Congress cut the BLS construction statistics budget from a requested $625,000 to $300,000 for the new fiscal year. At first, the Budget Bureau hinted it might give BLS an extra $150,000 or $200,000 from presidential emergency funds to help assure accuracy. With the money, BLS planned to speed up "final" estimates of each month's housing starts to the 26th of the following month instead of 3½ months later. It planned to step up its surveys of lag and lapse in building permits (BLS figures 2% of permits are never used, but admits in abnormal times like today's the figure may have changed). It planned to increase its check from quarterly to monthly in 96 counties where no permits are issued. The 96 counties form a cross-section sample from which 22% of US housing is projected.

For want of a nail. At months end, the Budget Bureau ruled BLS could have no more money. Sadly, construction statisticians scrapped their bright plans for more speed and accuracy. BLS would have to rely on its existing "preliminary" estimate of housing starts for the thermostat governing credit controls. Completely out of the picture was any chance for BLS to shift the basis for the weights it assigns its data from the 1940 census to the 1950 census. This could mean that BLS housing starts estimates are now chronically too low, because they do not take account of rising homebuilding in nonpermit suburbs. Nobody really knows. The basic fact was that the nation's biggest industry needs and deserves far better statistics.

Reni

BLS CONSTRUCTION STATISTICS chiefs—the men in charge of its painstaking monthly estimate of housing starts—are (l to r) Hersey (Pat) E. Riley, chief of the division of construction statistics (now on loan to the Point IV program); acting chief Walter W. Schneider and Herman B. Byer, assistant BLS commissioner who was the first chief of construction statistics.

How it works. The preliminary starts estimate is issued in Washington about the 12th of each month covering housing started the month before. The data with which BLS construction statistics division works covers, roughly speaking, about half of the total US housing. Reporting public housing is easy. BLS gets complete information directly from the government.

Measuring private housing is the main job. For the preliminary estimate, it goes like this: on the 4th or 5th of each month, BLS takes all of the regular permit reports received from prompt-reporting cities, adds in a selected sample of telegraph reports, especially from West Coast points. The bureau sorts the returns into four major categories (big cities, towns, rural permit areas and rural nonpermit areas) plus innumerable smaller groups set up in advance to weight the statistics for such variables as regional differences in building pace.

In February, 1951, which Construction Statistics Chief H. E. Riley considers a month typical of the coverage attained, BLS received actual permit issuance reports from building departments in 194 of the nation's 199 cities of 50,000 population or more. So this 26% chunk of private housebuilding (by 1940 standards) was fully reported at once. Another 30% of private building is usually accounted for by cities of less than 50,000. There are 3,265 of them in the US. Riley received reports from 1,520 in time for the preliminary estimate.

Rural ouija board. Rural areas where building permits are issued account for some 22% of US homebuilding. In time for the preliminary estimate, Riley heard from what counts as ⅞ths of them. But that ⅞ths means areas which had ⅞ths of the rural nonfarm dwelling units (among permit issuing areas) standing at the time of the 1940 census. The last 22% of private US homebuilding lies in rural nonpermit areas. For the preliminary estimate, BLS simply guesses at these on the basis of the trend in rural permit regions.

Against BLS' fixed yardstick of the relative importance of each type of reporting area, the bureau then computes separately the percentage changes in housing starts for each category. The weighted average determines the preliminary estimate. For instance, February 1951 showed a 8% drop from the preliminary estimate for January 1951, so BLS' estimate of housing starts for February was reduced 8% below January—to 80,000 units.

Final returns. Considering the data at its command, most experts agree BLS does very well to keep the average error in its preliminary estimate down to 5%. Mistakes get corrected three months later (though still by BLS' 12-year-old yardstick), when the bureau makes its final estimate of housing starts after hearing from all of the 96 nonpermit rural areas where its agents must count starts themselves, and from enough more building departments to raise the total coverage of US housing from 50% to about 75%. For February, 1951, BLS' final figure on private housing starts was 80,600. That was a correction of 0.7%. Since January, 1949, the preliminary estimate has been low 26 times (by as much as 6%), and high 14 times (by as much as 13%), says BLS.

Democratic platform urges public housing; Republicans ignore it, plug slum clearance

In their convention platforms Republicans and Democrats last month laid the groundwork for a campaign debate over housing issues that could either swell to sizeable proportions or stay where it is: deep in the background.

The Democrats took definite stands in favor of 1) rent control wherever there is "a substantial shortage of housing at reasonable prices," 2) continuation of the public housing, private housing and urban redevelopment programs created by the housing act of 1949, 3) "special" (but otherwise unspecified) housing aids to veterans.

The convention's resolution committee received the official credit for writing the Democratic platform. Observers of strange coincidences, however, found an amazing similarity between the Democratic housing planks and a proposed statement issued before the convention by the Public Affairs Institute of Washington, and urged upon the Democrats in Chicago by public housing spokesman Lee F. Johnson, executive vice-president of the National Housing Conference. Where the Democrats swallowed the public housers' platform verbatim is shown below in italics:

DEMOCRATIC PLATFORM

Rents. We strongly urge continued federal rent control in critical defense areas and in the many other localities still suffering from a substantial shortage of adequate housing at reasonable prices. Housing. *We pledge ourselves to the* [one word deleted] *fulfillment of the programs of private housing, public low-rent housing, slum clearance, urban redevelopment, farm housing and housing research as authorized by the housing act of 1949.*

We deplore the efforts of special interests groups, which themselves *have prospered through government guarantees of housing mortgages, to destroy those programs adopted to assist families of low income.*

We pledge ourselves to enact additional legislation to promote housing required for defense workers, middle-income families, aged persons and *migratory farm laborers* [phrase deleted].

We pledge ourselves to provide special housing aids to veterans and their families.

The GOP platform struck many an onlooker as cryptically brief—more eloquent by what it omitted than by what it said. The Republicans disagreed positively only on rent control. They would limit it strictly to "defense" areas with "critical housing shortages."

For what cheer it might provide to public-housing opponents (who got a sly, gratuitous rap on the knuckles in the Democratic platform), the Republicans did not readopt their 1946 plank in favor of public housing. In economizing on words, the Republicans did not declare against it, either. It looked as though the GOP would like to think public housing is not an issue.

REPUBLICAN PLATFORM

We will oppose federal rent control except in those areas where the expansion of defense production has been accompanied by critical housing shortages. With local cooperation we shall aid slum clearance.

Associated Press

THE SIZE OF THE FISH didn't lessen the smiles of Gen. Dwight D. Eisenhower and his host, Aksel Nielsen (r), president of Denver's Title Guaranty Co. and former (1949) president of the Mortgage Bankers Association. The Republican presidential candidate spent a week relaxing at Nielsen's 1,900-acre ranch near Fraser, 10,000′ up in the western slope of the Rocky Mountains.

With platforms traditionally "written in June but forgotten by August," the building industry would also want to peer behind the verbiage to the men in high places on the two tickets. There lay more clues to the industry's stake in the election's outcome—a subject initially explored by House & Home in June *(p. 134)*.

Well-known building figures were appearing prominently. Among them: Aksel Nielsen, former MBA president, who was host to Gen. Eisenhower for his postnomination vacation *(see photo)*; Sen. John J. Sparkman, the Democratic nominee for vice-president, who has been in charge of housing legislation in the Senate in recent years; Wilson W. Wyatt, former (1946) National Housing Expediter, whom insiders tagged for a key role directing Gov. Adlai Stevenson's campaign.

As for the candidates, Ike's housing-problem views were still as unknown as ever, although he has generally attacked "paternalistic" government activities. If he sought advice on housing from old friend Aksel Nielsen between fishing and political conferences he would have found little encouragement for public housing.

On the other hand, Stevenson has frequently gone on record in favor of public housing, but has also insisted that government subsidy is not the whole answer—"the problem is inherently one for private enterprise . . . the housing deficiency can only be met in the final analysis by all-out private building."

If precedent guides, in the months ahead both presidential candidates may devote at least one major speech each to housing. Thus the subject may become a hotter issue, particularly when the Sept. 30 deadline nears for limited federal rent decontrol.

Housing stands of the VP candidates

Nowhere on the 1952 political scene is the contrast between Democrat and Republican housing views sharper than in the records of the vice-presidential candidates. Sen. Richard M. Nixon (R, Calif.), the GOP nominee, has an established anti-public housing record. Three years ago in the house, Nixon voted to eliminate the public housing section of the 1949 housing act. He voted against the entire housing and redevelopment measure. In the Senate last year he voted to limit 1951 federal public housing starts to 5,000. This June he favored the same cutback. In the Los Angeles public housing row he supported efforts to cancel federal aid contracts.

Sen. John J. Sparkman (D, Ala.), the Democratic nominee, has registered unqualified approval of public housing. On civil rights and other matters, he has been described as a middle-of-the-roader, but Washington homebuilding and realty spokesmen complain he has batted 1.000 for every "socialistic" housing measure.

As chairman since 1950 of Senate housing and rent control subcommittee he has favored all rent control extensions and steered these and all defense and public housing measures through the upper chamber. In 1949 he introduced an unsuccessful bill for direct federal mortgage lending. He has vigorously resisted attempts to raise the 4% VA loan rate. Assumption of greater risk by government justifies the differential from the FHA rate, he insists.

Sparkman has criticized Fanny May's big defense mortgage program. His argument: if lenders will only advance funds against a government takeout, the Treasury might as well make direct loans in the first place and save the taxpayers the expense of paying "mortgage brokers' commissions."

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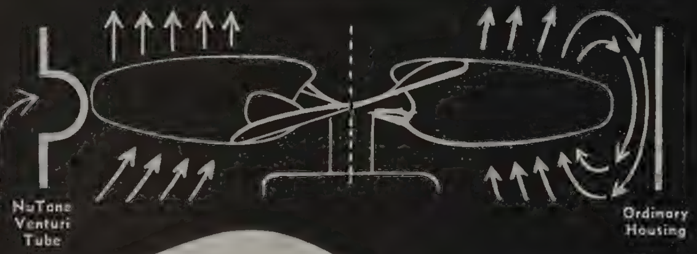

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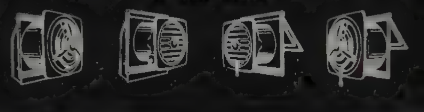

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Most big cities will retain rent controls after Sept. 30 deadline, survey indicates

Private housers who thought they won a victory over rent control in Congress faced some surprises this month. A House & Home survey showed that in six of the nation's eleven largest cities still under control local governments probably will ask and get continuation of federal rent control instead of allowing it to die automatically Sept. 30. Three more were on the fence. Only one city—Detroit—leaned toward decontrol. The outlook, as reported by House & Home correspondents:

Boston—Continuation already requested. Cambridge, Everett and 19 other communities also have asked for extension.

Philadelphia—Council appears "certain" to prevent expiration, probably by enacting city rent control ordinance.

Cleveland—City is preparing legislation and will probably retain control, but suburbs will probably drop it.

St. Louis—Continuation "appears certain." East St. Louis, Ill., has already authorized extension.

Kansas City, Mo.—Survey underway for city. Earlier studies always led to continuation actions, and Mayor expects similar vote if new check shows continued shortage. Kansas City, Kan., will remain under local rent control stemming from flood emergency.

Chicago—Public hearings started July 28. Final action not yet indicated.

San Francisco—Supervisors at stormy session temporarily tabled motion to conduct public hearings. But after dust settles, according to observers, city will probably request continuation.

Denver—City council, 6 to 3, rejected as "improper" a motion for a referendum. Further action uncertain until a mid-August council session.

Atlanta—Mayor favors retention, but the council action is still unpredictable, although decision will probably be "close."

Detroit—Survey being made for city council, on which only two members are known to favor continuation. Decontrol possible, but not certain.

New York—Rent control already under State administration. No prospect of repeal.

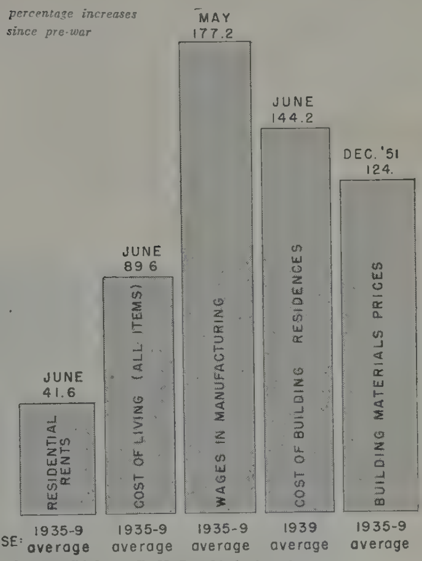
Red rent herrings? The ink was barely dry on the defense production act extension which promised decontrol (except for critical defense housing areas or in localities requesting continuation) when Woods raised storm warnings over "serious economic shock and hardship that might result" as rent ceilings ended for as many as 6 million US families. NAREB countered with a warning to city officials to "beware of Washington political pressure" for a longer rent freeze. Cried the Realtors' Washington Committee: "We can expect a repetition of all the tired, overworked scare predictions of skyrocketing rents, mass evictions and civil disorder in the event of the return to a free market."

What were the facts? BLS data for 29 large cities indicated that average rent increases since 1939 in several controlled cities have exceeded the average increases in some decontrolled cities. But generally, in rent controlled cities, rents had risen far less since prewar days than in decontrolled ones. BLS figures on percentage increases in eight decontrolled and 21 controlled cities from Sept., 1939, to the 1952 month indicated:

CONTROLLED CITIES

	% Increase		% Increase
New York, April	15.9	Baltimore, March	37.9
Buffalo, April	33.1	New Orleans, Feb.	38.1
Pittsburgh, Feb.	25.2	Cleveland, Feb.	38.4
Cincinnati, March	26.2	Minneapolis, March	39.7
Scranton, Feb.	26.6	Chicago, March	42.4
Philadelphia, Feb.	28.1	Atlanta, Feb.	45.2
Boston, March	32.4	Kansas City, April	46.5
St. Louis, March	32.9	Seattle, Feb.	51.1
San Francisco, March	33.7	Memphis, March	53.9
Detroit, April	36.1	Denver, April	54.2
Indianapolis, April	36.6		

HOW RENTS TRAIL IN THE ECONOMY



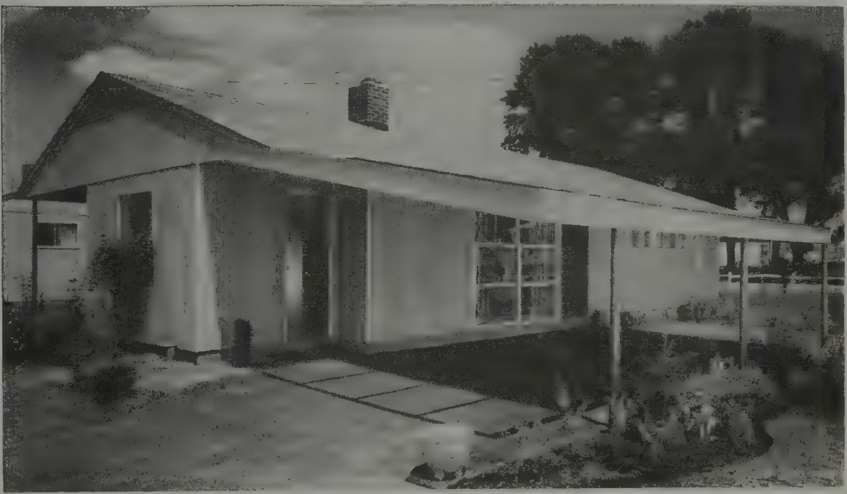
Source: BLS and E. H. Boeckh & Associates

DECONTROLLED CITIES

	% Increase		% Increase
Mobile, March	47.5	Jacksonville, March	57.0
Portland, Ore., April	48.9	Houston, Feb.	60.1
Richmond, April	51.8	Savannah, April	62.4
Los Angeles, Feb.	53.9	Birmingham, Feb.	80.9

Under general decontrol, Tighe Woods predicted, rent increases would range from 20% on higher-priced homes and apartments to "50 to 100% in the lowest brackets." Prospects were slim, however, that many homebuilders anywhere will feel much market boost as a result of rent hikes.

J. Alex Langley



Long Island builder apes Levitt design, finds sales great

When pace-setting Levitt & Sons transferred its operations to Bucks County, Pa. last fall, many a Long Island builder began scheming how to gain first place in the market abandoned by Levittown's creators. Last month, builders Irving Warfield and Gus Tarlofsky insisted they had the answer: imitation. Like Levitt's 1952 "Levittowner" (Oct. issue '51, p. 217), Warfield's Southwood at Syosset house (above) was priced at $9,990. Its floor plan, rooflines and exterior facade (color asbestos) were all but identical. One difference: a solid, instead of folding wall, between third bedroom and living room. Like the Levitt house, the Syosset design by architect A. H. Salkowitz had 1,000 sq. ft., 3 bedrooms, a two-way fireplace, slab floor. (Warfield did not include a refrigerator and washing machine in the sales price.) Result: 173 sales in first three weeks after tract opened. Warfield thought his house was "fastest selling" on Long Island.

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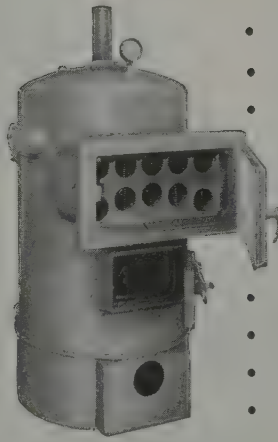

It's an old adage among architects that a sound home must have *a good roof, a dry basement and dependable heat.* The tastes and requirements of owners must, of course, be considered in the plans but on such basic matters as heating, the architect or heating expert should decide.

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FHA, PHA to begin anti-Red screening but Veterans Administration finds legal loophole

Sniping attacks on public housing have a disconcerting way of bouncing back on private building. In 1949 when Congress was considering the present public housing law, several attempts were made to impose a racial segregation ban on all projects. They were voted down largely because pro-public housing Congressmen threatened to impose the same restriction on FHA.

Before World War II, labor henchmen in Congress rose up in righteous indignation over persistent opposition to expansion of the public housing program, voted an amendment requiring that "prevailing wages" be paid on all FHA-insured housing. A last minute compromise removed most of the sting by limiting this to multifamily projects. Even so, thoughtful building men began to realize that leftwingers could and would use FHA as a hostage in housing's cold war.

Redlist boomerang. Last month, builders began to realize their own bullet had ricocheted again—this time in an amendment to the Independent Offices Appropriation bill by Rep. Ralph W. Gwinn (R, N. Y.), arch-foe of anything smacking of public housing. As approved by the House, the Gwinn rider would have shut off further federal aid to any public housing development harboring communists or members of other subversive groups blacklisted by the Department of Justice.

Subsequently, a warning by investment bankers and outraged public housers that this language would put the skids under public housing bonds resulted in a watering-down revision in the conference committee. As finally enacted, the anticommunist injunction was only an admonition. Subversives who managed to escape the screening would not subject a project to cancelation of federal subsidies.

But goaded by the social planners, the conferees decided to scourge all government-aided housing programs on Gwinn's basis. Written into the final House–Senate report was a policy statement declaring that the benefits of government insured or guaranteed home loans should be denied members of all organizations branded as subversive by the attorney general.

Not law, but enforced. Last month, the FHA began taking steps to comply with what it considered was a congressional directive even though it was not law. Readied were forms on which FHA home buyers would have to certify that they do not belong to subversive groups. Since FHA has direct dealing only with mortgagees, it will be up to the lenders to see that the certificates are properly signed. Along with the new forms, lenders will be given a list of organizations the Department of Justice regards as subversive.

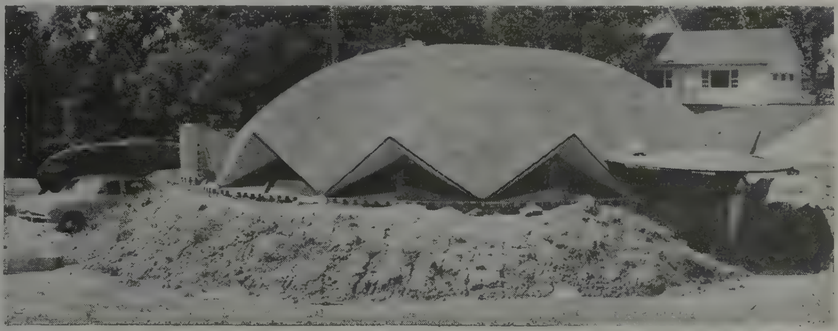
While lenders did not relish the nuisance of filling out another half million forms a year (the current total of all categories of FHA insurance), they could be thankful for two real breaks:

- ▶Violations will not invalidate FHA insurance, although detected perjurers will be subject to felony prosecution for false swearing.
- ▶Certification will not be retroactive. Thus occupants of the 3,750,000 units rented or sold under FHA financing since the program was launched 18 years ago will be unaffected.

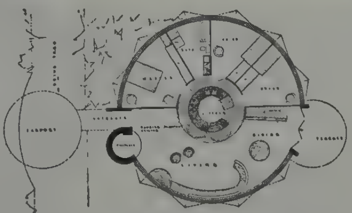
For tenants in FHA rental projects, however, the reprieve will be brief. Lease renewals as well as new purchase contracts will come under the subversive ban as soon as FHA headquarters staff finishes its paper work, dispatches the instructions and forms to its field offices. Officials hoped this would be by mid-August.

'Screen 'em all.' Jubilant over escaping the ignominy of having its program made the only target of a subversive purge, the Public Housing Administration whipped itself into a frenzy of compliance. PHA lawyers held that the amendment only applies to inmates of projects where federal-assistance contracts were made or amended after the effective date of the act (July 5, 1953). But the agency urged local housing authorities not to stand on this technicality, screen all tenants for subversion. One embarrassing reason: in Detroit, public housers were dismayed to find one tenant was the local correspondent of the Communist's *Daily Worker*.

VA dissent. Surprisingly, the Veterans Administration refused to take part in the loyalty purge. Reason: in setting up the home loan guaranty program for veterans, Congress gave VA no discretion as long as the applicants met prescribed terms: were honorably discharged, had not previously used their entitlements, were good credit risks. If the antisubversive policy were law, it would be different, advised VA lawyers. But Congress had only declared its views through a conference report. So VA's hands were tied. Unhappy VA officials hoped Congress would amend the law when it reconvenes in January.



Photos: Ed Stein, The Capital Times



Wisconsin round house is designed for built-in view

On a suburban lot with no appealing vista a house should have an interior that should be so rich and varied that no view is required. Or so reasoned 27-year-old architect James R. Dresser in designing his own circular, concrete-domed "sunflower" home (above) at Madison, Wis. Sunday motorists (right photo) stop and stare at the reddish domed round house, 40' in diameter with about 1,800 sq. ft. of floor area. Fourteen lenders also stopped short—"bewilderment was supreme," says Dresser—before "previous business relations and imagination" prompted Madison 1st Federal Savings and Loan to take the mortgage. Dresser sets the cost at $14,000, excluding the value of much work by himself.

Unusual interior has floor of ¾" x 1¼" laminated plywood strips laid edge up in circles conforming to the house. Walls of waxed industrial cork blocks reach 7' 6" above floor, so the dome is the ceiling for all rooms except the dropped-ceiling bath. Abstract intermediate ceiling of six concrete bowls each 5' in diameter will be hung over kitchen beneath central skylight 7' in diameter. Earth piled around exterior provides cheap insulation. Circular carport roof is ¾" plywood molded on the job.

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Defense housing program assailed by AFL; builders fear overbuilding in a few spots

Hardly anybody had ever been really happy with the defense housing program. Architects feared it would spread more ugly cracker boxes across the US landscape (it has). Mortgage bankers were little interested in advancing funds because of low interest, higher-than-usual risk. Homebuilders, even when they could scrape up mortgage money, found they had to haggle with FHA for commitments that would let them build. Military officials grumbled that rents were too high.

Neglected defense. To the gradually rising chorus of complaint, the AFL last month added a bitter attack. Said AFL President William Green in a proposal to the Democratic convention resolutions committee: "The most neglected aspect of our defense program to date has been the utter lack of an adequate federal housing program to provide decent housing facilities for the low income and middle income families of the nation. We urge federal action to build low cost homes for workers now living in huts and trailer camps in defense communities, as a vital part of the defense program itself." Harry C. Bates, president of the AFL bricklayers union and chairman of AFL's housing committee added: "In defense areas all over the country, many defense workers have been forced to return to their homes because they could not find adequate housing for themselves and their families. Others stayed on under terribly inadequate living conditions."

In ignorance or malice, Bates blamed "private builders" for the fact that only 7,500 of the 85,931 defense houses planned were actually completed in mid-July. A truer version came from Acting Mobilizer John R. Steelman in his quarterly report: "The principal obstacle to construction of defense housing continues to be the shortage of mortgage funds." Steelman also took note of the dismal construction progress. In 19 areas with the largest housing programs (1,000 or more units), less than a quarter of the homes planned were built. In six areas (Bridgeport, Bucks County, Camps Cooke & Roberts, Calif., Hartford, Indianapolis and Topeka) "not a single house was yet ready for occupancy," said Steelman.

Too much or too little? As Federal National Mortgage Association resumed issuing advance commitments, there was hope at last that much defense housing stymied for lack of private mortgage money would be able to proceed. But now, homebuilders raised a new worry: were some areas being overbuilt with defense and Wherry Act housing? With the rearmament stretchout, said Chairman Dick Hughes of NAHB's defense housing committee, "we are ahead of the (housing) demand in more instances than we are behind." Samples:

▶ In San Antonio, President R. N. White Jr. of the real estate board complained that the area's 2,712 Wherry units were "ruining the San Antonio rental market." He said the city's 7% vacancy rate was the highest since pre-war days. Builders will oppose construction of any more Wherry housing.

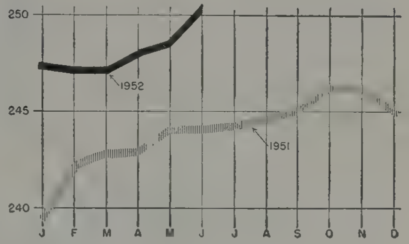
▶ In the Lawton-Ft. Sill, Okla., area, builders said vacancies in completed defense houses were running between 20 and 25%. To Maj. John C. Goodeve, Ft. Sill billeting officer, this was "just keeping abreast of the demand." When the next class of students reached the field artillery school, all agreed the vacancy rate should drop sharply.

▶ In Wichita, homebuilders said they were opposed to any more government-inspired defense housing. In the next three months, some 2,000 defense homes will be completed, yet already vacancies were appearing in the $80 to $150 a month rental bracket. Most defense workers were looking for something cheaper.

In nine areas, however, the Air Force last month declared adequate family housing was "almost non-existent": Dover, Del.; Bainbridge, Ga.; Kingston, N. C.; Moses Lake, Wash.; Limestone, Me.; Niagara Falls, N. Y.; Oscoda, Mich.; Rapid City, S. D.; and Sumter, S. C. NAHB officials summed up the problem for the War Manpower Commission: "It is extremely difficult to schedule completion of housing to meet the needs of defense workers in view of the many changes being made in the program."

BUILDING COSTS KEEP RISING

INDEX: 1926-29=100

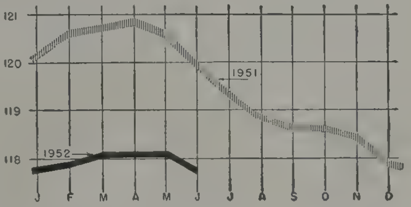


Source: E.H. Boeckh & Associates

LABOR PAY INCREASES continued to push up the cost of residential building in June. Boeckh's index reached 251.1—3.6 points above its January level as pay hikes were reported for crafts in 80% of the 20 cities surveyed.

MATERIALS PRICES DROP

INDEX: 1947-'49=100



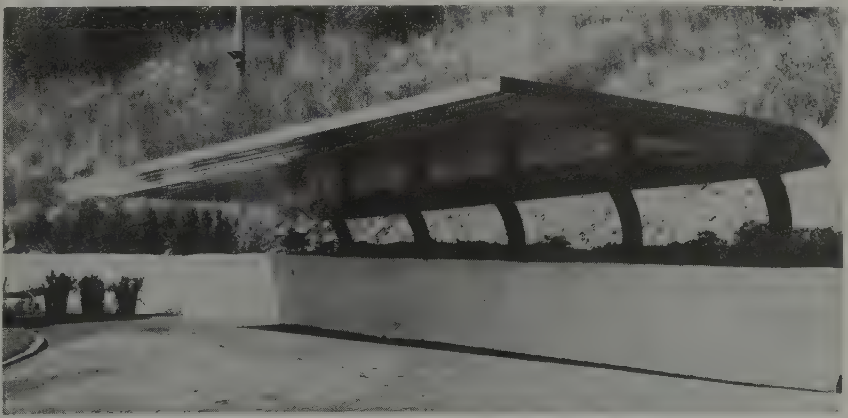
Source: Bureau of Labor Statistics

WHOLESALE PRICE INDEX of all building materials compiled by BLS sank 0.3 points in June to 117.8 as lumber prices dipped.

Los Angeles tract deeds require garbage disposers

Real-estate developers' routines for riveting ritzy features into housing tracts through fancy deed restrictions reached a new altitude in Los Angeles. California Country Club Estates required that each of its 407 homes ($25,000–$60,000) include an electric garbage disposer. Another deed restriction: houses must be 1,500 sq. ft. or bigger. Said developer Louis Schulman: "We didn't want any flies."

Al Monner



Cantilevered carport solves hillside turnaround problem

When Dr. Howard Stenger, a big name in Portland, Ore. eye glasses, decided he wanted a carport for his hillside home, he was confronted by the fact that supporting posts would prevent turnarounds by his front door. The solution, worked out by builder Burton Newton with Engineer C. L. Stupfel, was this cantilevered carport. The aluminum-covered roof projects 14½', is held up by five 8" steel I-beams sunk 12½' in the ground in concrete. It will hold 1' of wet snow with no sag.

BRIGGS

refuses to compromise with

Quality!

IT'S A TIME of keen competition in the plumbing ware industry—with every manufacturer on the alert for ways and means to increase his sales. Naturally there is a temptation to accomplish this by cutting prices. But with costs on the rise, as they are today, this usually means reducing quality.

THIS THE MAKERS OF BRIGGS BEAUTYWARE REFUSE TO DO!

Briggs will *not* lower the traditional high quality of these fine plumbing fixtures to meet the current competitive trend. Briggs will *not* make an undersize bathtub or one without a rim seat. Briggs will *not* manufacture a second, cheaper grade of fixtures—*all* Briggs fixtures are acid-resistant; *all* Briggs colors are non-fading.

The modern porcelain enameled formed steel bathtubs and lavatories developed and perfected by Briggs are the finest obtainable. Briggs high-density vitreous china lavatories and closets are the very best we know how to produce. Briggs brass fittings are of excellent design engineered for long, dependable service.

Briggs is proud that over the years every modification in its plumbing ware design—every change in materials and manufacturing techniques—has been made to *improve* the product. This is the way Briggs will always do business.

WHEN YOU ORDER BRIGGS BEAUTYWARE YOU BUY THE FINEST!

SEMPER QUALITAS

BRIGGS BEAUTYWARE

PLUMBING FIXTURES

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This is the second installment of a regular new feature in House & Home*—a monthly report on important developments in the modernization of mortgage credit,, with particular emphasis on the expanding potential of the package mortgage, the open-end mortgage, and the expandable mortgage. In next month's installment Bert King of the Veterans Administration will discuss some of the new VA rulings.*

US Savings and Loan League backs flexible mortgage

Says Bill Levitt: "Today we have to tell our buyers: 'If you want to improve your house next year by adding another bedroom you will have to get a new mortgage or else you will have to pay for the improvement with short term credit at 9.6% interest.'

"It would be a very, very helpful thing if we could get a mortgage which would let us say to our customers: 'We have so arranged your financing that when you want to add these value-increasing improvements you can get the money quickly at low interest with 20 years to pay it back, even beyond the original total of the mortgage and even before you have created more equity by paying your mortgage down."

Have you a client or customer who has recently moved into a new house and would like to borrow some additional money on the first mortgage to pay for adding a garage? . . . or finishing the expansion attic? . . . or putting in air conditioning?

Have you a client or customer who has just bought an old house and would like to borrow some more money on his mortgage to modernize it and put in a labor-saving kitchen?

If you have, there will soon be good news for you—

For next month the U. S. Savings and Loan League will urge all its 3,900 members to begin writing their conventional mortgages in such a way that it will be easy for you to get the extra money needed for improvements.*

This will require little more than rewording their security clause to give first mortgage status to additional advances even beyond the original amount of the loan.

A new wording to that effect has been worked out by U.S. Savings and Loan League's general counsel, Horace Russell, who for many years has been working with the editors of this magazine to develop a more flexible type of mortgage, better suited to the needs of homeowners. It would modify the security clause to read:

"To secure a note for $0000 executed and delivered concurrently herewith . . . *and any additional advances made by the holder of this mortgage, provided that the total amount* so secured shall at no time exceed $0000."

Explains Mr. Russell: "This recording of the larger figure charges third parties with notice of the total amount secured by the mortgage, and in most states gives additional advances the same priority as the original loan. In some states it will still be necessary to ascertain that no additional liens have been recorded. The City Title Insurance Co. will give title insurance on the additional advance anywhere in the US for $5 per $1,000** just on the homeowner's affidavit (*see* H&H, June '52, page 80). This is incomparably better for both lender and borrower than a refinancing, which is apt to take a month and cost about 1% of the entire mortgage.

"An adequate provision for additional advances, properly explained to the family in the beginning, will help the lender establish such good will with its customers that it can sell its loans for a better price and still have more satisfied customers and friends. Home mortgage lending is a family service, and in the long run the lender will find the safest and most profitable contract is the one best suited to the family's needs through the whole term of the mortgage.

Plenty of precedent

"Open-end mortgages whose amount might vary even from day to day (so as to secure a merchant's account) were well known at common law in England long ago and were adopted and widely used in this country from the beginning.

"Provision for additional advances for home improvement was less important when most mortgages were made for a short term, for additional needs could be taken care of in the regular refinancing. Today most mortgages run for 20 or 25 years, and over such a long period of time practically all families need some additional credit accommodation. As a result there is still too much refinancing—which costs too much and takes too long.

"The family with a good home as security is entitled to have imbedded in its first mortgage the means of obtaining mortgage credit at mortgage rates on mortgage terms to pay for any reasonable improvement of its property. In other words, it should be able to borrow at about half the interest rate and less than a fourth the monthly payment required by the most favorable FHA short-term credit."

For expansion, modernization

"If a family applies for a small loan on a $20,000 house, the mortgage institution should be smart enough to write the mortgage with provision for additional advances up to $15,000. If a family applies for an $8,000 loan on a new $10,000 house with an expansion attic and no garage, the lender should be smart enough to write the mortgage with provision for additional advances up to perhaps $12,000, so that when the income of the family justifies the place can be finished without the delays and expense of refinancing. Likewise, when an old house is sold the lender should be smart enough to write the purchase money mortgage as a package mortgage (all mortgages today should be package mortgages) with provision for additional advances sufficient to modernize the property and equip it with all modern appliances including air conditioning."

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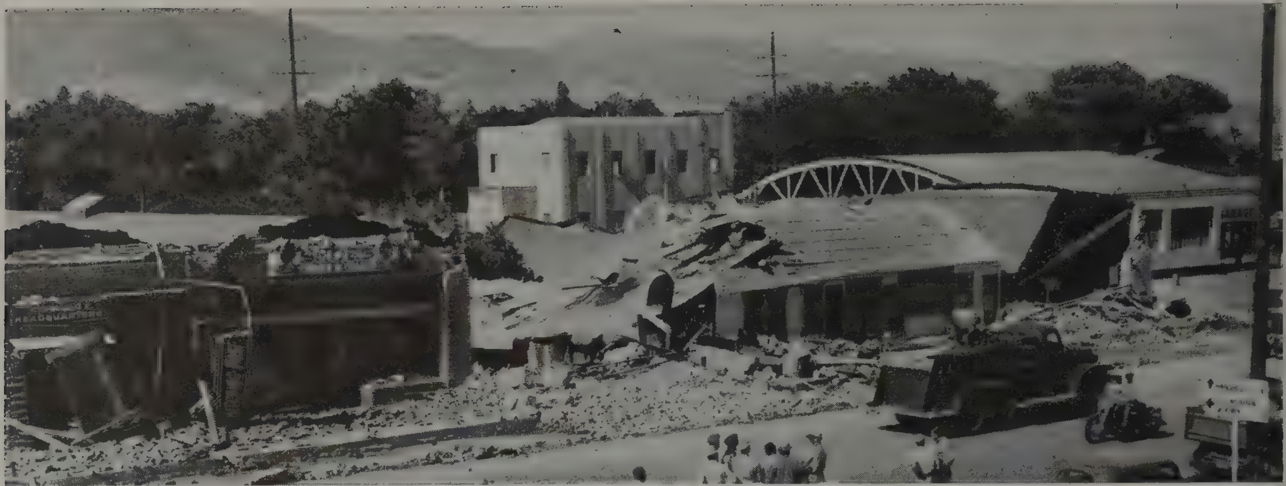
* At least one of the big insurance company lenders (National Life of Vermont) will take the same action.

** This is an all-inclusive charge, with no extras for title search, abstract of title, closing charges, disbursements, or attorney's fees, and it is offered on all titles, whether previously insured by this company or not.

Associated Press



MOST OF TEHACHAPI'S 12 DEAD were found in the two demolished buildings (right center) behind the fire truck. Odd Fellows hall (rear), of poured reinforced concrete, was undamaged. Prof. G. W. Housner of Caltech called the quake too light to test buildings designed to resist seismic shock.

California quake wrecks most of a town but code-conforming buildings escape

The southern California earthquake of July 21, which took 13 lives and caused property damage that may well reach $100 million, gave the building industry a costly but invaluable demonstration of building code provisions intended to make structures withstand such violent shocks.

The quake, triggered by a shift in the Bear Mountain fault (not the Garlock fault as first reported), was the severest the US has felt since the San Francisco quake and fire of 1906. It had, said John M. Nordquist of Caltech's seismological laboratory, the force of 2,000 atomic bombs—enough to shift the west end of Bear Mountain Peak 3′ up and 3′ north. Eighteen miles from the quake's center, the sleepy railroad ranch and mill town of Tehachapi (pop. 1,557), 118 miles north of Los Angeles, bore the brunt of its shattering force.

Not well built. Many Tehachapi homes were built of adobe brick. Many an old Tehachapi business building, erected long before the town adopted the uniform building code of the Pacific Coast Building Officials Conference, was fashioned of unreinforced brick held together by lime mortar. So to building inspectors who flocked to the scene from Los Angeles, it was no surprise to find 41 Tehachapi business buildings damaged, including nearly every one along its Main St. Seventeen were in ruins beyond repair. Of Tehachapi homes, 57 were damaged or untenable. Four were completely demolished. Of the 13 deaths, 12 were in Tehachapi—nine of them in two families crushed beneath aged falling walls of brick, stone, or adobe. Damage estimates reached $2.6 million.

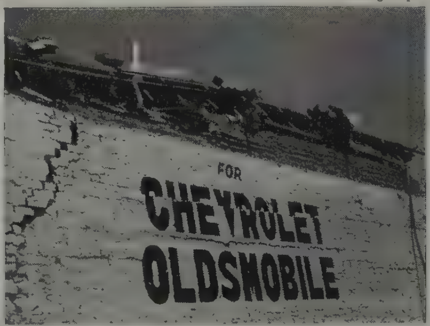
'Tie the corners together'. To Los Angeles' inspectors, it appeared that any Tehachapi building built to withstand a lateral force of 10% or more of its total static weight (a provision required by Los Angeles' building code) came through the earthquake undamaged provided it was properly erected. For instance, on one building built in 1945, roof corners broke off. Checking the plans, chief LA building inspector Dick Morris found the design had not been followed by the contractor. Several poured reinforced concrete structures ripped apart at the roof line. Inspectors said the reason was not enough reinforcing rods. What reinforcing there was saved such buildings from collapse, they added. Chief lesson for builders who want to strengthen old precode buildings was plain: be sure brick walls are reinforced and that corners are tied together with stringers and braces.

In other quake-rocked towns, damage ran higher, but loss of life less. At Bakersfield (pop. 60,000), nearest city, two wings of Kern County general hospital were condemned (as was all of Tehachapi general hospital). Two giant water towers collapsed, flattening one building and damaging others. Kern County agriculture took a multimillion dollar beating through torn irrigation pipes (which may shrivel $15 million of cotton) and earth upheavals that changed land contours so much new irrigation systems must be laid out. In Los Angeles, the tremors shattered 27 street display windows in the May Co.'s downtown store. Cost: $500 each. The stores' 8th floor powder room was rendered unsafe and May Co. officials were gravely considering add-

Associated Press

JUANITA HOTEL, where one man was killed, was rated as completely destroyed as was building at right. Construction: unreinforced brick.

LA Building Dept.



S-SHAPED FLANGES (arrow) one end of anchor bolts kept roof atop this quake-wracked brick wall, said building inspectors.

LA Building Dept.

CORNICE COLLAPSED on reinforced concrete building because of too little reinforcement. But what there was kept rest intact.

LA Building Dept.

MODERN STORE was well designed except for lateral stress. Inspectors found steel rod (arrow) was not bolted to framing.

ing the extra travel time of female employes to the 5th floor comfort station to their quake insurance claim. Many quake policies pay only for damage over 10%—annoying to the many southern California business and home owners who suffered minor damage.

Fluorescent hazard. The quake felled suspended fluorescent light fixtures in scores of buildings, notably in the new Prudential building where literally miles of tubing wound up draped over desks and floors. Worst hit were fixtures held to ceilings by rigid 1/4" rods (strong enough to support three men) at one end and by flexible chains at the other. As the earth's vibration synchronized with the swing of the fixture, rods snapped. Lights held up at both ends by chains proved safe. Said Gil Morris, head of LA's department of building and safety (who persuaded the city council to adopt a model antiearthquake ordinance two years ago): "It's just one of those things everyone overlooked."

None of Los Angeles' approximately 1,000 schools suffered damage—not even fallen plaster. A strict antiearthquake code was imposed on all California schools after a 1933 quake that took 118 lives in Long Beach also revealed many a school as a potential quake death trap.

LA Building Dept.

PARAPET CRACKS in otherwise unscathed concrete bank building indicated builder did not give enough lap to steel reinforcing between wall and parapet.

Builders denounce proposal to use FHA to enforce antiwaste national building code

Instead of going after the waste in building codes pointed out by the President's Materials Policy Commission (H&H, July '52), homebuilders last month went after the commission.

The commission, in its monumental survey of US raw materials problems, predicted a 35% increase in the rate of construction by 1975, but attacked the industry for its enormous waste of materials. It suggested, among other things, an antiwaste national building code enforced backhanded by government housing agencies.

'Unthinkable.' Protested NAHB's Executive Vice President Frank Cortright: "It is difficult to imagine anything more impractical and inequitable than the proposal that FHA insurance and VA guarantees should not be made available to home buyers in cities refusing to conform with a set of federal standards. Desirable as modernization of building codes is in many cities, the refusal of FHA and VA insurance to prospective home buyers because a locality will not accept federal dictation in the matter of codes is unthinkable."

The building industry might well agree that the presidential commission went too far in suggesting FHA insure no mortgages in a city which did not conform to a sense-making set of national standards. But the commission might have been 100% right if it had demanded that FHA stop making local codes basic to its insurance, stop giving a home built under a wasteful code a higher valuation than the same home built under a money-saving code.

Gentle pressures. Such gentle pressures as lower valuations for wasteful design, as Sen. Everett Dirksen (R., Ill.) recently observed, are "the kind that get things done." Fire insurance underwriters, for instance, often tell a city it must have another fire house, extend its hydrant system, or else face a big increase in insurance premiums. Local demand generally gets the fire house or the extra water mains.

FHA officials sometimes do require changes in materials—as a bar to extravagance. But builders know such cases are the exception, rather than the rule. As it is now, generally the more the required waste the higher the mortgage FHA will approve.

Silent officialdom. Housing officialdom behaved as if it considered the Presidential report a hot potato. A full month after the report had been issued, HHFAdministrator Raymond M. Foley still evaded comment after first promising to stand up and be counted. Foley said he would have something to say later. One apparent reason for his wary silence: the NSRB set up a task force of 25 agencies to study the report. The findings were due Sept. 22.

AFL bans jurisdictional strike picketing; WSB urges okay on builder bonus pay

In the last five years, jurisdictional strikes in building have swelled to a major nuisance. In 1947, there were 68. They involved 11,200 workers, caused 232,000 man-days of idleness. By last year, BLS counted 198 jurisdictional strikes involving 63,400 workers at a loss of 317,000 man-days.

Last month, the AFL Building and Construction Trades Department finally did something to stop it. The general presidents of 19 building trades unions agreed on a new policy banning picketing in jurisdictional disputes, sent it out to 12,000 local building trades unions, the 18 state councils and 576 local building trades councils with a stiff warning:

- Locals who post picket lines in jurisdictional strikes will face "immediate discipline." Building Trades President Richard Gray said this will be revocation of charters.
- Local councils who authorize or support jurisdictional strikes will face charter revocation.
- Other unions must ignore jurisdictional picket lines while waiting for discipline to strike. Gray insisted that this time the AFL "meant business."

Last month also brought encouraging news about another labor problem annoying the housing industry. Before Korea, many a builder kept his key workers by paying them more than prevailing wages. But WSB has banned such bonus pay. Before leaving office, the old WSB passed along a recommendation to the wage board that took office at month's end: revoke the ban.

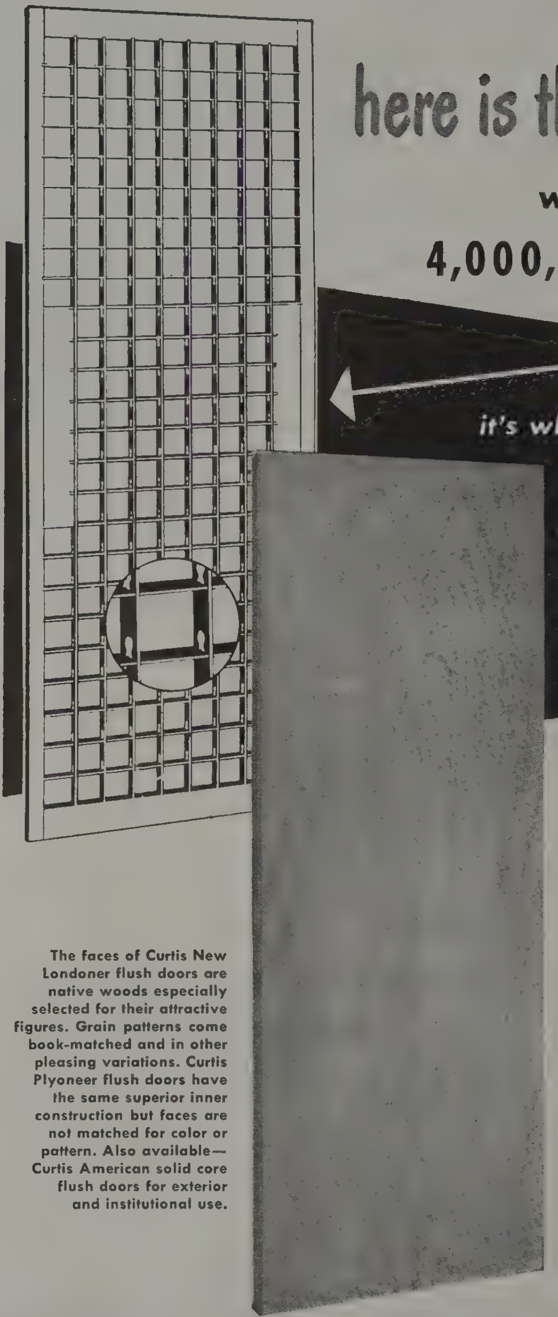
Boom in air conditioning grows; room units a sellout

By last month, the boom in residential air conditioning was on in a big way. An impressively growing list of homebuilders were announcing developments offering built-in air conditioning in the $18,000-up bracket. Newspapers across the nation broke out in a rash of stories proclaiming the trend (many of them quoting HOUSE & HOME's 42-page survey of air conditioning

here is the flush door CORE

with more than

4,000,000 SUCCESS STORIES



it's what's inside that determines how well a flush door will keep its shape—and its fit. More than 4,000,000 installations, over 33 years, have proved that the Curtis New Londoner hollow-core flush door assures lasting satisfaction. Here are the "core questions" which the Curtis New Londoner answers so successfully:

- ***Is it all wood?*** The Curtis New Londoner core is made of carefully selected, properly seasoned wood. No inferior or substitute materials are used.
- ***Is the grid properly meshed?*** The mesh formed by the interlocked pine strips provides great strength—with light weight—and a perfectly flat, sturdy base for the door faces.
- ***Is the grid locked in place?*** The Curtis New Londoner door has no "floating" parts. The precision milled grid is locked into the door to form one completely joined unit.
- ***Are stile and rail areas generous?*** There's no skimping in the stiles and rails of the Curtis New Londoner door. Ample widths assure superior sturdiness.
- ***Is structural strain eliminated?*** The special method of assembling the various parts of a Curtis New Londoner door eliminates all interior structural strain—doors fit perfectly and are easier to open and close. The entire door is sealed against moisture.
- ***Is construction balanced?*** In the Curtis New Londoner door, moisture content is balanced and carefully controlled in manufacture—3-ply panels forming each face of the door mean balanced sturdiness. This construction provides full protection against sticking and warping in all climates.

The faces of Curtis New Londoner flush doors are native woods especially selected for their attractive figures. Grain patterns come book-matched and in other pleasing variations. Curtis Plyoneer flush doors have the same superior inner construction but faces are not matched for color or pattern. Also available—Curtis American solid core flush doors for exterior and institutional use.

1866 CURTIS

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I want to know more about Curtis New Londoner hollow-core flush doors; also Curtis American solid core flush doors.

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in June). *Associated Press* gave national circulation to a forecast that "complete year-round air conditioning of a new home at no extra cost may be just around the corner, say equipment manufacturers."

Room-conditioner stampede. Most dramatic evidence of public acceptance was a stampede to buy room air conditioners that swept dealers shelves bare in many a city. The buying rush wiped out a backlog of 63,000 unsold units left over from 1951's production of 237,490. Nearly every manufacturer could report, like the Frigidaire division of General Motors, "we are sold out across the country." By June 30, Carrier Corp. found it had sold 15% more room coolers than in all of last year. Vice-president John R. Hertzler of York Corp. (whose 1952 output was entirely sold) described dealers and distributors as "scrambling for units which no longer are available." Westinghouse, which does not make room coolers, said the first half of 1952 saw sales of its 2 to 7½ hp packaged units zoom to "42% greater" than ever before.

Spreading demand. The boom had begun in the Southwest, spread to Southeast and then to the East when summer turned on record heat and humidity. Now it gave signs of reaching back across the Midwest.

▸ At Des Plaines, Ill. Herzog-Knutze Realty Co. opened a subdivision of $18,700–$19,500 homes that promoters described as the first large-scale midwestern medium-cost air-conditioned project.

Builders adopt insurance against own embezzlement

In Chicago, a fast-talking promoter collected $87,000 in down payments from a group of veterans, laid a few house foundations to convince them he meant business, skipped town with their cash. A woman real-estate operator absconded with $30,000 in down payments. Both were caught and jailed. But victims lost their money. And homebuilders got a black eye.

Last month, NAHB ventured a forecast that by the end of 1952, builders in 25 cities will adopt a plan insuring home buyers against such embezzlements, and (far from incidentally) building confidence in the homebuilding industry. The scheme began in Chicago, where the Metropolitan Home Builders Association found none of its 350 members had defaulted on a down payment since the association was formed 12 years ago. Lloyds of London, for $7 a year per member, wrote $100,000 insurance per builder against misappropriation of a down payment by any active members of the association. Home buyers are also covered against loss of down payments if a builder goes broke.

PEOPLE: rift splits Miami builders association; new FHA boss picks aides; Ferris elected N. Y. AIA chief

In Miami, dissension inside the Builders Association of South Florida swelled to revolt proportions. A group headed by builders **Emil Gould** and **Charles I. Babcock** laid plans to form its own association (though retaining membership in the old group). Reason, said dissident builder **James M. Albert**, was that "the association's membership has been broadened to include general contractors, subcontractors, material dealers [so that] out of some 275 members, there are only about 40 builder-members. . . . We don't see eye-to-eye with the association's leadership." Two other members of the insurgent faction: ex-NAHB president **Thomas P. Coogan**, builder **W. M. Porter**. Retorted Association President **Bill Thompson**: "The Gould-Babcock-Albert-Coogan-Porter faction has been after [executive secretary] **Cap Miller's** scalp about four years. They tried to get him ousted recently, but the board, instead, renewed Miller's contract . . . with a raise."

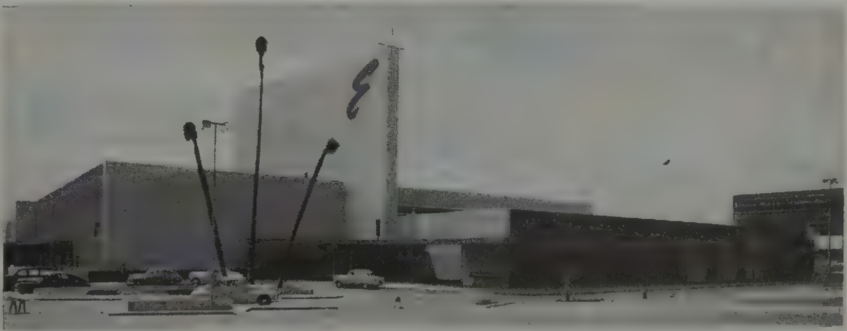
Appointment of **Walter L. Greene** as FHA commissioner was confirmed by the Senate just before Congress adjourned early in July. A few days later the new agency chief named **Hugh Askew**, director of Oklahoma City office for last six years, as asst. commissioner for field operations, key administrative position directing field officers, succeeding Herbert C. Redman. He also appointed **Edgar C. McIntosh**, assistant deputy for Title I division, as an assistant for liaison with prefabricated industry, succeeding Donald M. Alstrup. In New York, **Thomas G. Grace**, FHA state director since 1935, and previously state counsel for HOLC, resigned to return to private law practice.

AIA's New York chapter elected **Hugh Ferriss** as its new president. He succeeds Francis Keally, Ferriss was president of the Architectural League of New York in 1943, has served as consultant to the UN headquarters planning staff and currently is consultant for the Inter-American Center in Miami and Manhattan's Avenue of the America's Assn.

DIED: **Dr. Eugene Gustave Steinhof,** 71, professor of architecture at the University of Rio Grande do Sul, Porto Alegre, Brazil, and lecturer at Harvard, Yale and other US institutions under auspices of AIA and Beaux Arts Institute, July 10 in Los Angeles; **R. Clifford Bangs,** 68, former president of Washington, D.C., real-estate board, July 12 at Rehoboth Beach, Del.

NAMED: mortgage banker **George H. Dovenmuehle,** as president of the Chicago Dwellings Assn., non-profit group formed in 1948 to erect low-cost veterans' housing; Engineer **Fred N. Severud** of New York, as winner of the Frank P. Brown medal given by Pennslyvania's Franklin Institute for "outstanding engineering accomplishments;" **Robert E. Entzeroth** of St. Louis, as winner of the 1952 LeBrun traveling scholarship of the New York AIA chapter.

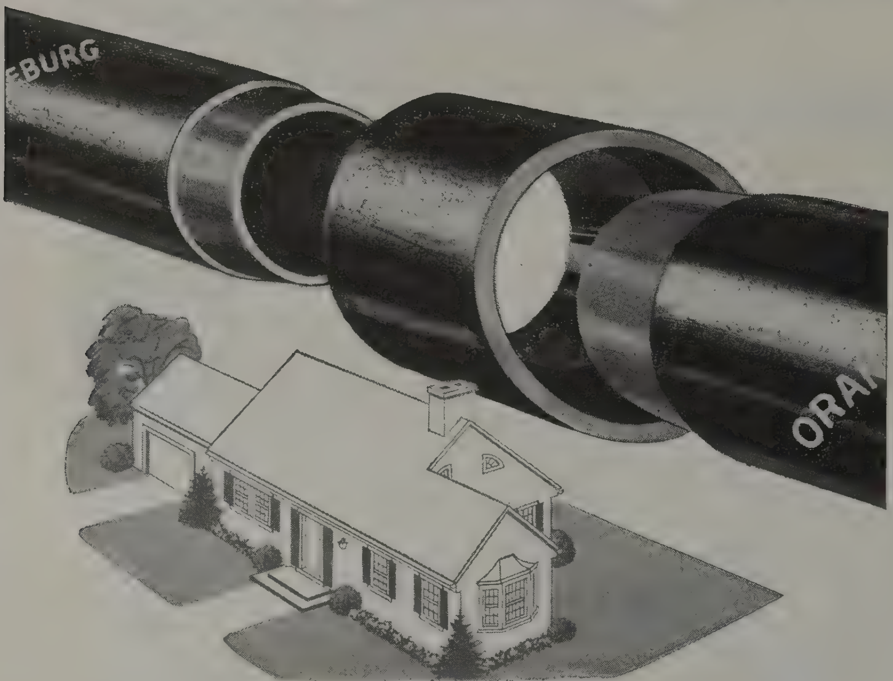
Skelton Studios



Compact San Francisco gets first branch department store

San Francisco's first complete branch department store opened last month in builders Henry and Ellis Stoneson's $30-million suburb-like shopping center in the southwestern corner of the city. The branch of The Emporium, top dog of San Francisco retailing, was designed by Welton Becket & Associates, cost some $3.5 million, will have 92 departments—everything the main store has but a bargain basement and furs. The exterior of concrete, fieldstone and ruffle brick is topped with a white porcelain enamel tower over 100' high which not only advertises the Emporium's "Big E" trademark but houses elevator and ventilating gear.

ROOT-PROOF JOINTS



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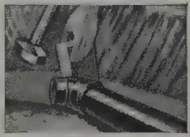
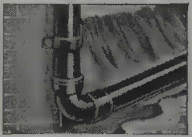
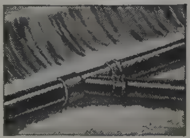
Orangeburg is non-metallic, resilient. It resists acids, alkalies, salts, oils, greases and gases found in sewage wastes and soils. No cement or compounds are needed.

House-Sewer


Conductor Lines


Storm Drains



Eight foot lengths are easy to install. Orangeburg fittings—⅛ and ¼ Bends and Wyes—are made of Orangeburg material and tooled for Taperweld Joints.

Many Uses also for Orangeburg *Perforated* Pipe

...including Septic Tank disposal fields; foundation footing drains; draining wet spots in lawns, drive-in theaters, athletic fields, parking lots, airports, etc. Orangeburg Snap Couplings keep pipe in line, prevent silting at the joints. The new Orangeburg Fittings are also widely used with Orangeburg Perforated Pipe.

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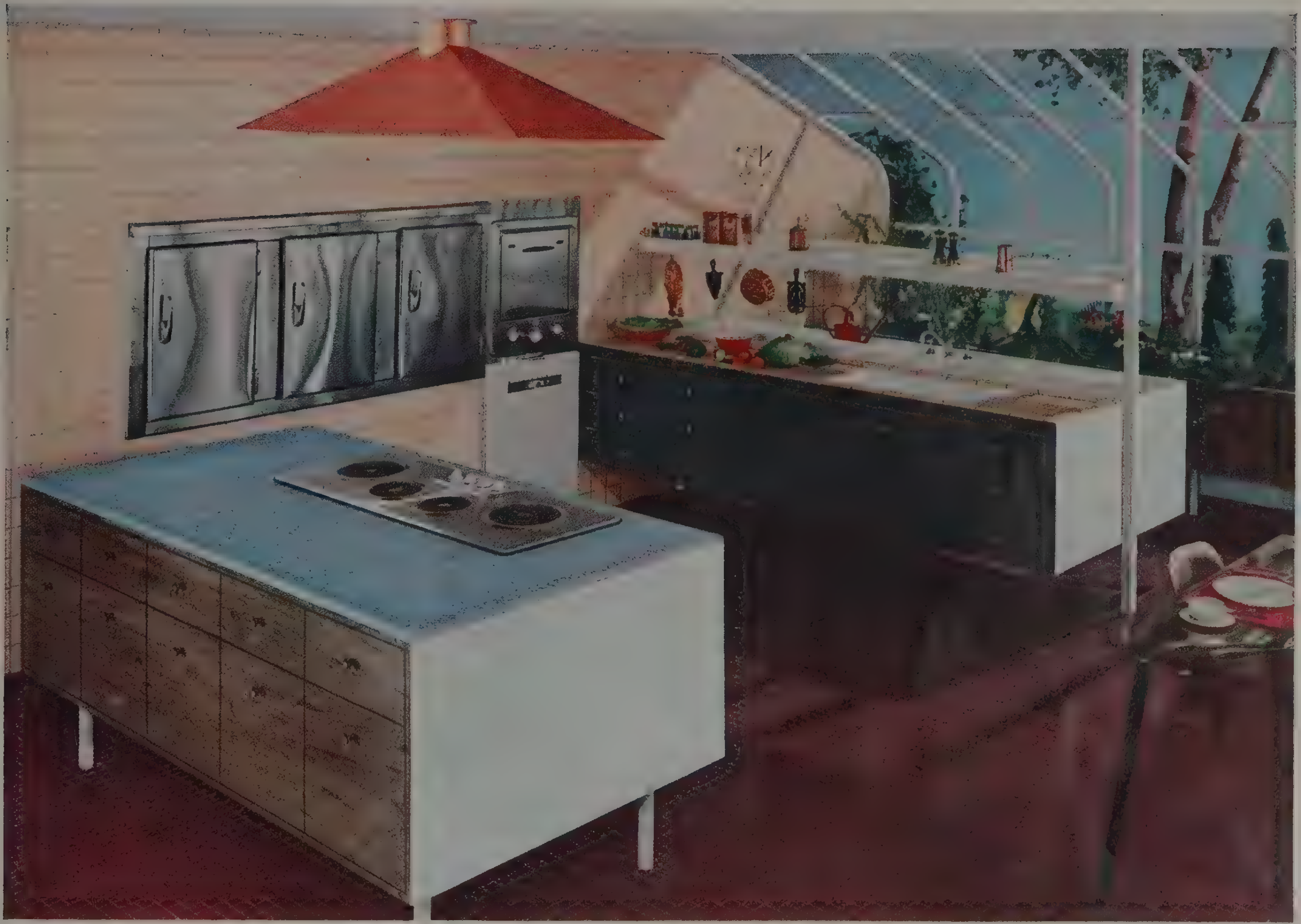
BEHIND THE BLUEPRINTS

Of **RICHARD J. NEUTRA** someone has written: "The Los Angeles architect has become legend and his work classic in his profession." Such has been the impact of this Austrian-born, 60-year-old modern architect's work. Trained at Vienna's Technische Hochshule, Neutra also studied under famed Adolf Loos, was later associated with Eric Mendelsohn on the important Berliner Tageblatt Building (1922). Neutra migrated to the US in 1923, worked for Holabird and Roche, met Sullivan, visited Wright for several months, established himself in Los Angeles in 1925. Ever since then, a stream of daringly conceived modern houses, office buildings, and schools has come off the Neutra drawing board. This month's house on the edge of the desert continues this Neutra tradition *(p. 74)*.

Washington architect **CHARLES GOODMAN** has spread the gospel of modern design in the nation's capital for 18 years. Born in New York City, he was educated at the University of Illinois and the Armour Institute of Technology, copping from the latter every prize in sight available to architectural students. His entree to Washington was a job with the Public Buildings Administration where his "violent aversion to eclectic architecture" moved him to missionary work for modern public design. Since 1938, Goodman has had his own office, except for a wartime stint with the Air Transport Command. Goodman is known for his well-designed, modern subdivisions, is responsible for remodeling a builder development *(p. 80)*.

C. W. SMITH has the imposing title of "Director, Housing and Construction Technology, Housing Research Foundation, Southwest Research Institute." Smith brings to this post varied experience garnered as: construction superintendent on commercial and industrial building (1927); merchant housebuilder; housing engineer; retail sales supervisor for Standard Oil Company (1930-36); regional public relations director. Household Finance Corporation (1936-46). The coordinated housing research program, which Smith now directs, was founded jointly by the MAGAZINE OF BUILDING and Revere Copper & Brass, Inc., in 1947, activated in 1948. The Housing Research Foundation became a part of Southwest Research Institute in 1949. Smith, 45, a native Iowan wrote *New Frontiers for Home Builders (p. 130)*.

(Continued on page 66)



Kitchen design by George Nelson, A. I. A.

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George Nelson

Architect George Nelson used Clay Tile in designing this idea-provoking kitchen. Spacious clay tile work surfaces, easily cleaned and glowing with color . . . suspended over the warm red tones of a clay tile floor that needs only an occasional swabbing with a damp mop. A handy bank of waist-high refrigerator doors and an oven recessed in a mellow background of glazed wall tile—the most soil-resistant and enduringly beautiful of all wall surfaces. A clay tile, heat-resistant counter top which enhances the convenient burner unit with practical beauty.

Whether you plan to design, build or remodel a commercial, industrial or residential structure, remember clay tile. An ever-increasing range of ceramic "fired-fast" colors and designs is available. You can recommend or use clay tile without reservation in any situation calling for a durable, beautiful surface that will resist intense heat, moisture, staining, scratching or fading. Wherever clay tile is installed, two distinct advantages immediately result: a sharp drop in maintenance costs and a permanent stoppage to refinishing and replacement costs.

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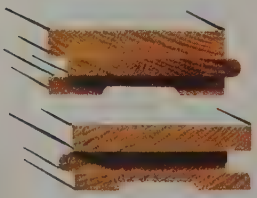

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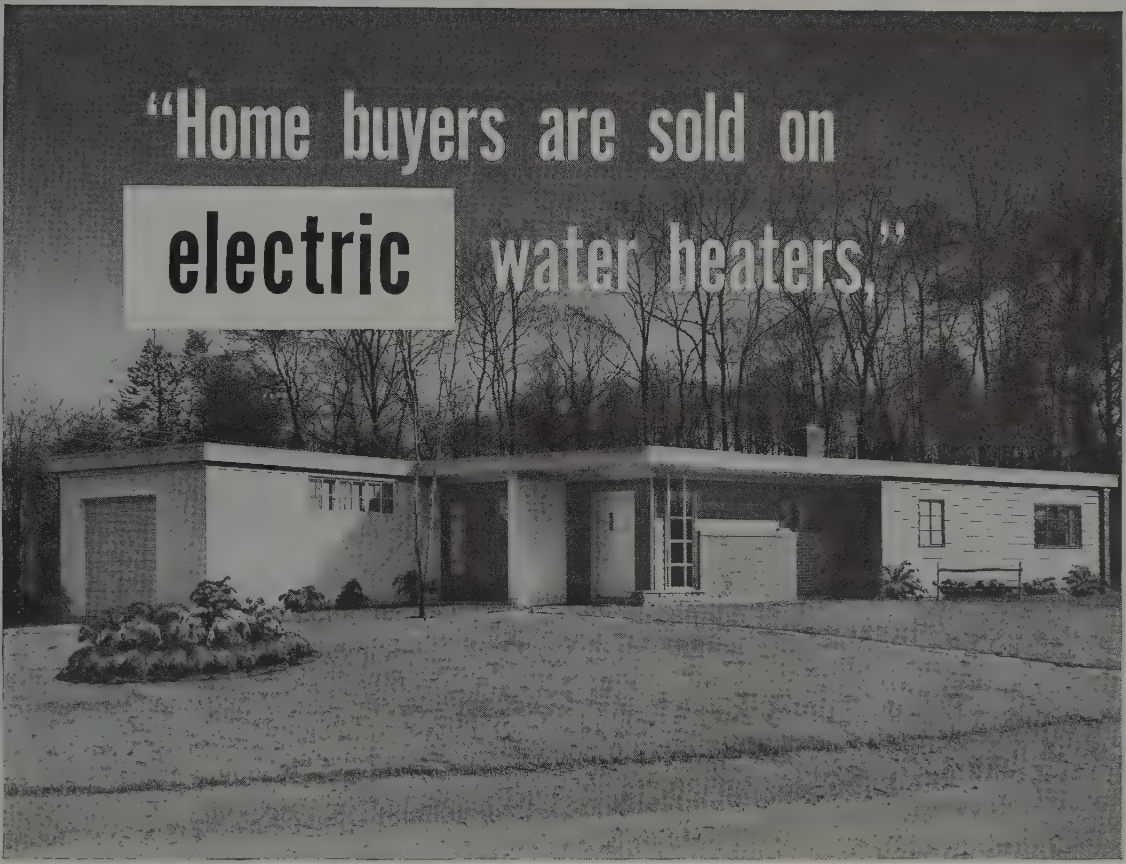
BEHIND THE BLUEPRINTS

EDWARD B. HAWKINS, 49, designs and builds contemporary houses in and around his home town of Denver, Colo. Hawkins studied engineering for two years at Colorado A. and M., then abandoned Colorado from 1924 to 1942 to do tile subcontracting and housebuilding in the Chicago suburbs. Hawkins' interest in design was piqued by his work as general contractor for Chicago architects Paul Schweikher and Ernest Benkert. Returning to the West in 1942, Hawkins did purchasing and procurement for the Rocky Mountain Arsenal at Denver. Since 1945, he has devoted himself to the design and construction of contemporary houses in Denver and Englewood, Colo. *(p. 120)*, with modern planning starting at the subdivision level and permeating every phase of structure.

Seattle architect **VICTOR STEINBRUECK** was born in North Dakota in 1911, left the flat midwest plains three years later to live in the scenic Pacific northwest. Steinbrueck won his architectural degree from the University of Washington in 1935, spent the next five years working in architects' offices in Seattle, Los Angeles and Idaho. For two valuable years (1942-43) before going into the army, he was architectural supervisor and detailer for a big contractor building public-housing units and related structures. Upon his release from the army in 1946, Steinbrueck opened his own office and began teaching at his alma mater's school of architecture. Now an associate professor, he teaches design part time, still tends meticulously to his private practice, doing all his own work *(p. 112)*.

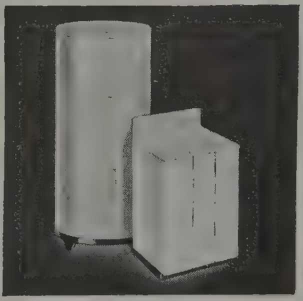
Texas-born designer **CRAIG ELLWOOD**, 30, moved to California at the age of three months to become a permanent resident, except for three and a half wartime years with the army air force. On his return to civilian life in 1946, Ellwood entered the construction field without previous technical training, working with a contractor whose specialty was contemporary structures. After prodigious research on his own and study at UCLA's Extension Division, Ellwood shifted to design, beginning practice in 1949. He has designed numerous homes *(p. 102)* several apartment units *(p. 96)* and some small commercial structures, with particular emphasis on limited budget projects. Last year, he was commissioned to prepare preliminaries for 1,000 reinforced concrete houses in Israel.



"Home buyers are sold on electric water heaters,"

These Cliffwood houses in suburban Shaler Township are in the medium-price bracket—from $13,500 to $18,500 including equipment. Built on hilltop sites, of simple modern design, all are equipped with *Electric* Water Heaters.

says Pittsburgh builder NOBLE S. CLAY



"People like the features of *Electric* Water Heaters—so completely automatic, and with the attractive appearance that blends so well with other kitchen and laundry equipment," says Mr. Clay. "They're pleased, too, with the cleanness of operation, and the operating economy that results from short hot water lines and fully-insulated tank. And frequently *we* find that the Electric Water Heater permits definite savings in construction and installation. Because it requires no chimney flue connection, we can locate it in the utility room or kitchen—for most efficient operation—or in the combination kitchen-laundry so often used in modern plans."

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Chet Bojarski, right, owner of Bojarski Bros., builders, talking over the Klingaman Electronic Moduflow job with Honeywell salesman John Nankervis

"Electronic Moduflow is the perfect control system for ranch-style homes"

says Chet Bojarski, rising young Gary, Indiana, builder

"Custom-built ranch homes with radiant heating are my specialty. And I draw Honeywell Electronic Moduflow into the plans of every one of them.

"I've found the two go hand in hand. Together they make the perfect home heating team.

"Moduflow takes care of the rather slow response characteristic of radiant heating. It is able to do this because it has a special thermostat—the Electronic Weathercaster—mounted *outside* the house. The Electronic Weathercaster detects and responds instantly to changes in the outside temperature, sending signals to the heating plant inside. The heating plant is thus warned *ahead* of time.

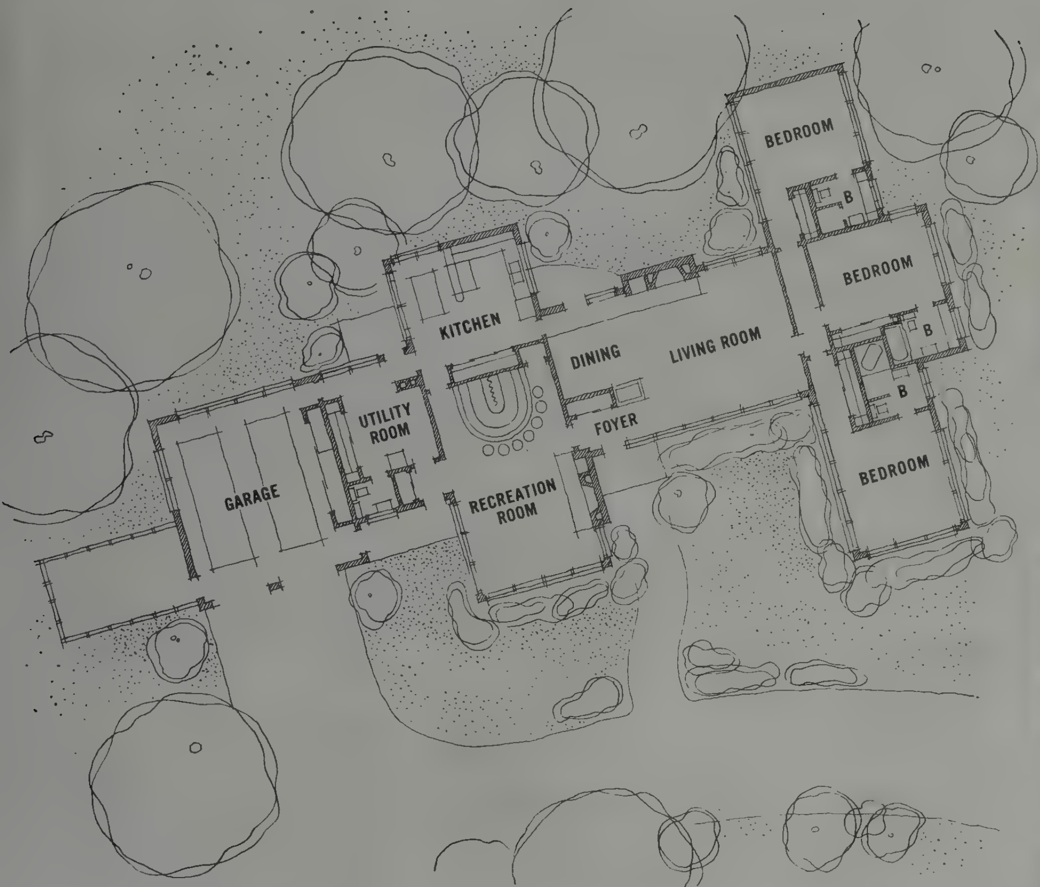
"That well-known, overall time lag always present in mechanical controls does not exist with electronic controls.

"I tell prospects radiant heating is the most modern kind of heating they can buy; and when combined with Electronic Moduflow *cannot be surpassed* for controlled comfort."

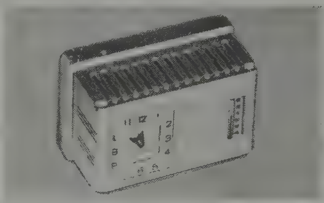
Here is one of builder Chet Bojarski's typical Electronic Moduflow-Radiant Heat "combinations"—the beautiful 8-room rambler-type home of Mr. and Mrs. Claude Klingaman, Gary, Indiana. For details see the floor plan on next page.

H HONEYWELL

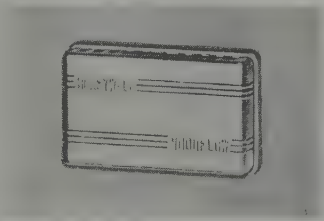
Another Plus-Profit Idea from Honeywell



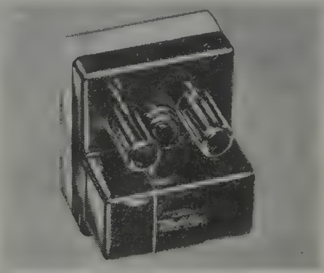
Electronic Weathercaster. Senses temperature changes *outside* the house, as they occur, and sends signals inside.



Electronic Chronotherm. Provides pin-point indoor temperature control plus automatic night set-back, automatic morning pick-up.



Electronic Averaging Thermostat. Balances indoor temperature readings to within a fraction of a degree.



Electronic Relay Amplifier. Interprets signals from all three thermostats and relays information, by electronic impulse, to heating plant.

Put the magic of Honeywell Electronic Moduflow to work selling your homes!

Prospects are intrigued when you mention that magic word "electronics" in connection with the homes you build!

Electronic Moduflow is up to 28 times more accurate and sensitive than ordinary mechanical systems for controlling the temperature.

Electronic Moduflow is *the answer* to controlling temperatures in rambler and ranch-style homes. See-saw, uneven temperatures – due to the larger outside exposed areas in such homes – never occur.

Electronic Moduflow greatly increases the value of the homes you build, gives you a bigger per unit profit.

Electronic Moduflow can be used in homes of practically any size. It's a natural for controlling radiant-type heating systems, regardless of whether ceiling or floor panels are used. It gives your clients wonderful temperature control regardless of *what* kind of heating plant or fuel they use.

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This floor gives you more to offer in a basementless house

Now you can feature a luxurious floor of Armstrong's Rubber Tile in your quality basementless houses. A special development of Armstrong research in adhesives now permits the use of this floor over new on-grade concrete floor slabs.

The alkaline moisture problem of grade-level installations no longer limits your flooring choice to the materials commonly used. Armstrong's Rubber Tile answers the long felt need for a more beautiful, more comfortable, more durable floor in the basementless house.

The distinguished good looks of this aristocrat of floors, its rich coloring, high luster and unusually clear graining will appeal immediately to the buyer who wants a floor of superior quality. Your prospect will also appreciate the greater durability of Armstrong's Rubber Tile. Its indentation resistance of 200 pounds per square inch is eight times that of asphalt tile.

The exceptional resilience of Armstrong's Rubber Tile provides a cushioning effect that assures quietness and comfort underfoot—a luxurious plus value of the sort that the buyer expects in a fine home.

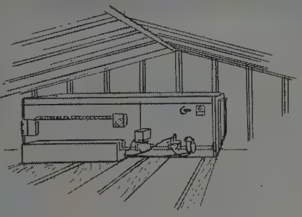
Whatever other quality features you may put into better basementless houses—be sure to include a floor that's in keeping with the highest standards of construction. A floor of Armstrong's Rubber Tile will be additional evidence of merit in the houses you offer—and its service will uphold your reputation for quality.

SEND FOR FREE ROOM PLAN

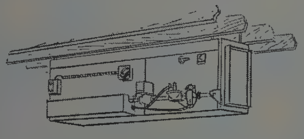
For a floor plan of the living room shown on this page, with a layout and list of furnishings and color scheme description, write Armstrong Cork Company, Floor Division, 1408 State St., Lancaster, Pennsylvania.

ARMSTRONG'S RUBBER TILE

Here's a new gas-fired horizontal-type heating unit designed to save floor space...



. . . installed in the attic

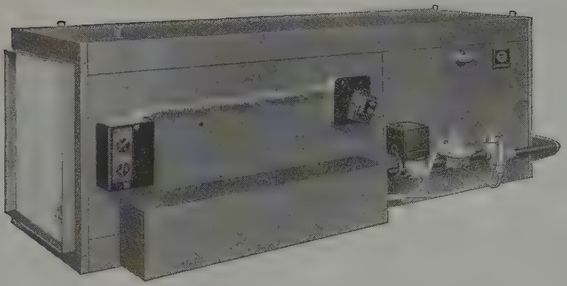


. . . or suspended under the floor

HERE'S THE PAWNEE with access panel removed. The heart of this new horizontal unit is its heavy steel heating element and efficient slotted port-type burner which is especially designed to provide correct amount of heating surface without hot or cold spots. The burner, made with rugged cast iron body, is easily removed for servicing, if necessary. Inside of the Pawnee's jacket is protected by corrosion-resistant reflective high temperature aluminum paint. Flue outlet is designed for maximum flexibility of installation. Draft hood prevents excessive drafts from affecting combustion. Individual controls are the finest available.

The PAWNEE

Winter Air Conditioner



● The new horizontal Pawnee winter air conditioner saves valuable floor space in one-story houses. It can be installed in an attic, suspended under the floor in crawl space, or overhead in a hallway, closet, utility room or similar out of the way place.

In an attic installation the Pawnee may be used as a ventilator to circulate cooler air in summer. No change is necessary, other than a simple by-pass to discharge the air drawn from the living zone into the attic space where it will flow outside.

Installed in the crawl space under a basementless house, the Pawnee allows complete freedom of duct layout . . . any type of system may be used. The warm air registers may be located on either inside or outside walls. This horizontal unit can be easily installed in perimeter heating jobs, too.

The compact Pawnee winter air conditioner is made in four sizes and burns manufactured, natural, mixed and liquefied petroleum gas. With its smart Forge Red jacket and trim lines, the Pawnee makes a neat, attractive installation. **American Radiator & Standard Sanitary Corporation,** P. O. Box 1226, Pittsburgh 30, Pennsylvania.

see our CATALOG in SWEET'S FILE for BUILDERS

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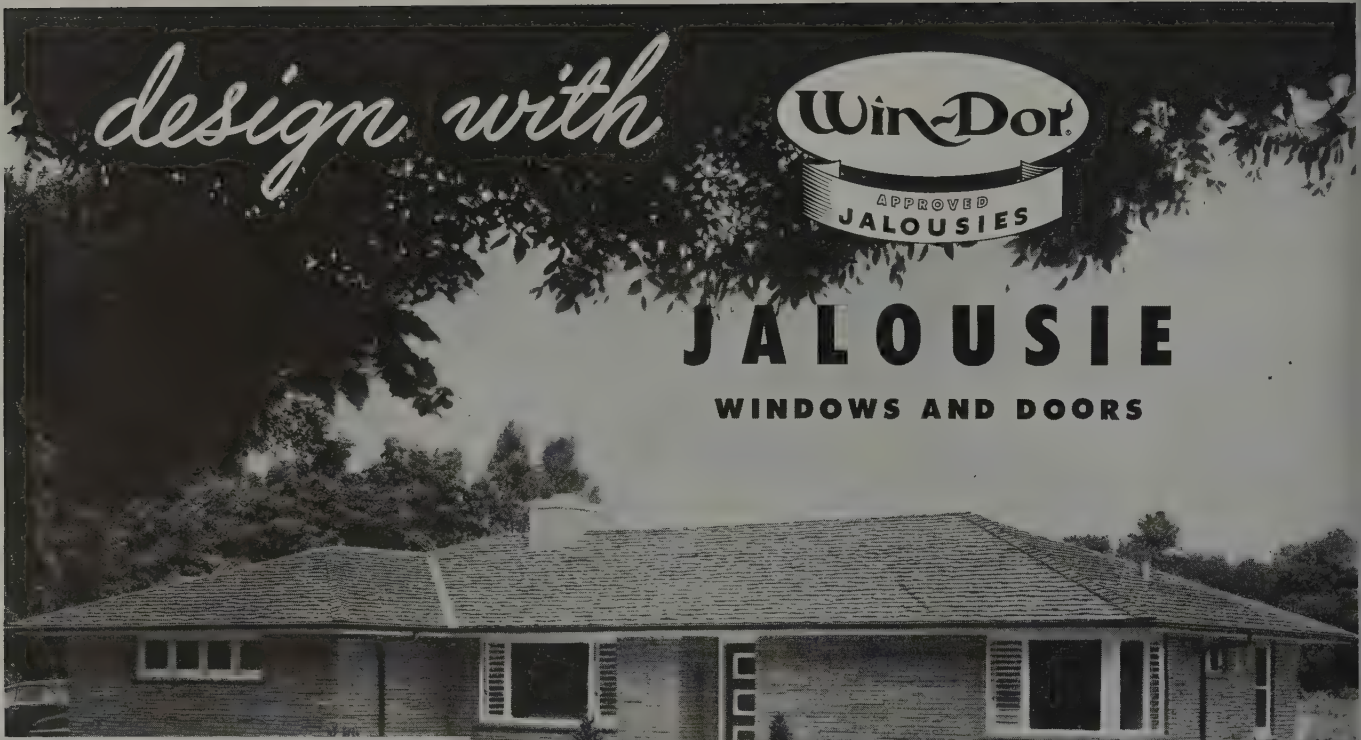

JALOUSIE

WINDOWS AND DOORS

Again, Win-Dor sets a new architectural standard of quality in the Win-Dor Jalousie window. In this modern home of Mr. and Mrs. John H. Gross in Elgin, Ill. Win-Dor Jalousies have been used as primary windows; units of precise engineering incorporating the famous Win-Dor operators and patented Win-Dor hardware. Only Win-Dor Approved Jalousies offer these advantages . . .

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For convenience in kitchens, Win-Dor Jalousies are ideal.

With louvres of glass or wood, these efficient modern windows provide not only a functional but a decorative unit for architectural design. They are used as standard window openings, as side vents for large areas of fixed glass, as porch and breezeway enclosures and as door panels.

★ See Sweet's—Section $\frac{17a}{CA}$ for complete ★ details and specifications.

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The mortgage mess

The text for this little sermon is from Matthew 26:52—*"They that live by the sword shall die by the sword."*

Or, to paraphrase the parable in more modern and less warlike words: *"No business that tries to live by government favors should be surprised if it ends up strangled in government regulations and red tape."*

For example, take a look at homebuilding and what government regulations are now doing to it. The homebuilders' three biggest headaches were deliberately created for them by the government:

Item: The government has told homebuyers they can probably save most of the down payment if they don't buy a house this summer, but sit tight until Regulation X comes off.

Item: Regulation X, which began as a legitimate credit control to curb inflation and save critical materials, has been taken over by the Fair Dealers and made a club to drive homebuilders into the under-$7,000 field (even though the government, for its public-housing program, has decided $7,000 homes are seldom worth building).

Item: By forcing an artificially low interest rate which drove mortgage money into other channels, the government has made it extremely difficult for all but a few lucky or well-connected builders to get either FHA or VA financing.

What more could the government do to discourage homebuying and discourage the building of better homes? . . .

We agree wholeheartedly with every criticism the homebuilders can raise. But we do not agree that the cure for these government-created troubles is more government intervention—like having government lend more money through Fanny May to make up for the money government has driven out of the mortgage market.

On the contrary, we believe the faster the homebuilders shake themselves loose from any dependence on government favors incompatible with sound economics, the healthier and more prosperous their industry will be.*

This magazine has gone on record not once but many times that FHA financing is the best thing that ever happened to the homebuying public and the homebuilding industry, an outstanding example of partnership between government and industry at almost no cost to the taxpayer, a partnership which need involve only a very small subsidy and very little in the way of political favor. We see every reason why that partnership should be continued and strengthened on the basis of sound economics, but we view with alarm the two fairly recent changes in the FHA-VA pattern which threaten to transform the basis of FHA and VA from economics to politics.

These new and unsound features of the otherwise excellent FHA-VA mortgage insurance system—these two government favors which have cut FHA and VA financing off from the free market, the two government favors which now threaten to cut the homebuilders off from the free economy—are only these:

▸ A fictitious low interest rate—low enough so only the homebuilders are having any trouble borrowing all the money they want this year, but not low enough to be of any real value to homebuyers (on a $10,000 mortgage it saves them never more than $24 a year—all of it tax deductible);

A fictitious amortization schedule, under which very little is paid off in the early years. As a result, only continuing inflation has kept FHA's default rate low, for without inflation a large proportion of five-year-old houses sold like rent might not be worth the mortgage today.

Neither of these new favors is worth the price the homebuilders are paying. ***A free place in a free economy is the birthright of every American, and the homebuilders should not sell that birthright for such a mess of potage as the mortgage mess today.***

** On rental housing there may indeed be no escape, for rent control has perhaps permanently destroyed rental housing as an attractive field for private investment.*

Richard Neutra designs

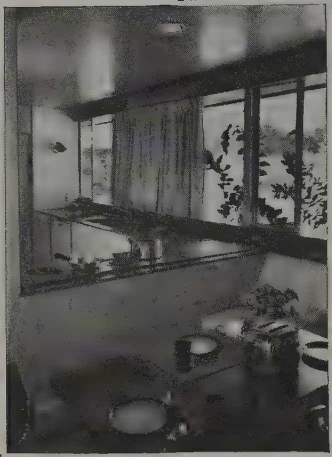
Compact enough
to fit into a small builder house,
neat enough
to satisfy his big-house clients

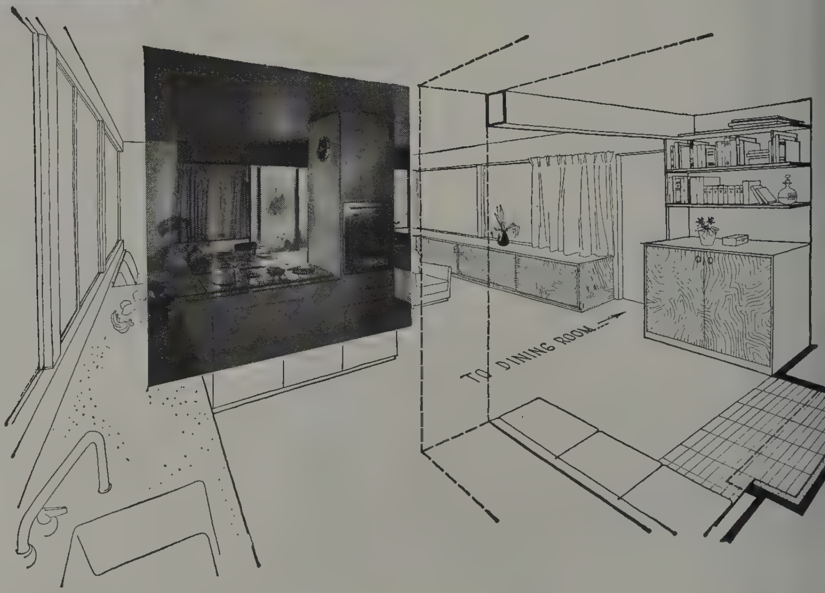
LOCATION: Ojai, Calif.
RICHARD NEUTRA, architect
D. E. COLEMAN, general contractor

It happens that the minimum cooking-eating-working-living space illustrated on these two pages is the center of a very lavish house (which is illustrated on the next four pages). But however lavish the rest of that house may be, its 20′ x 20′ family room is as compact a solution as even the tightest-minded builder could hope to find.

For small houses this room suggests new ways to make better use of limited space, for big houses it might be the prototype for a new kind of room that the American house now lacks; a room for informal living, distinct and separate from a formal "parlor" to be used only on "occasions." For many a family is beginning to find that it needs *two* living rooms; and the rough and ready family room which Richard Neutra has designed for this house is a fine example of what that second living room might be like.

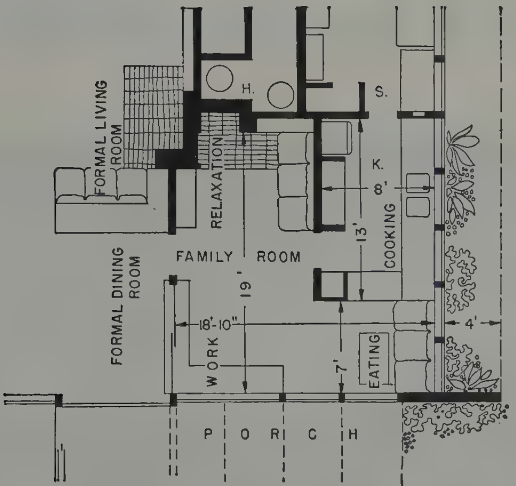
Photos: Ann Rosener.



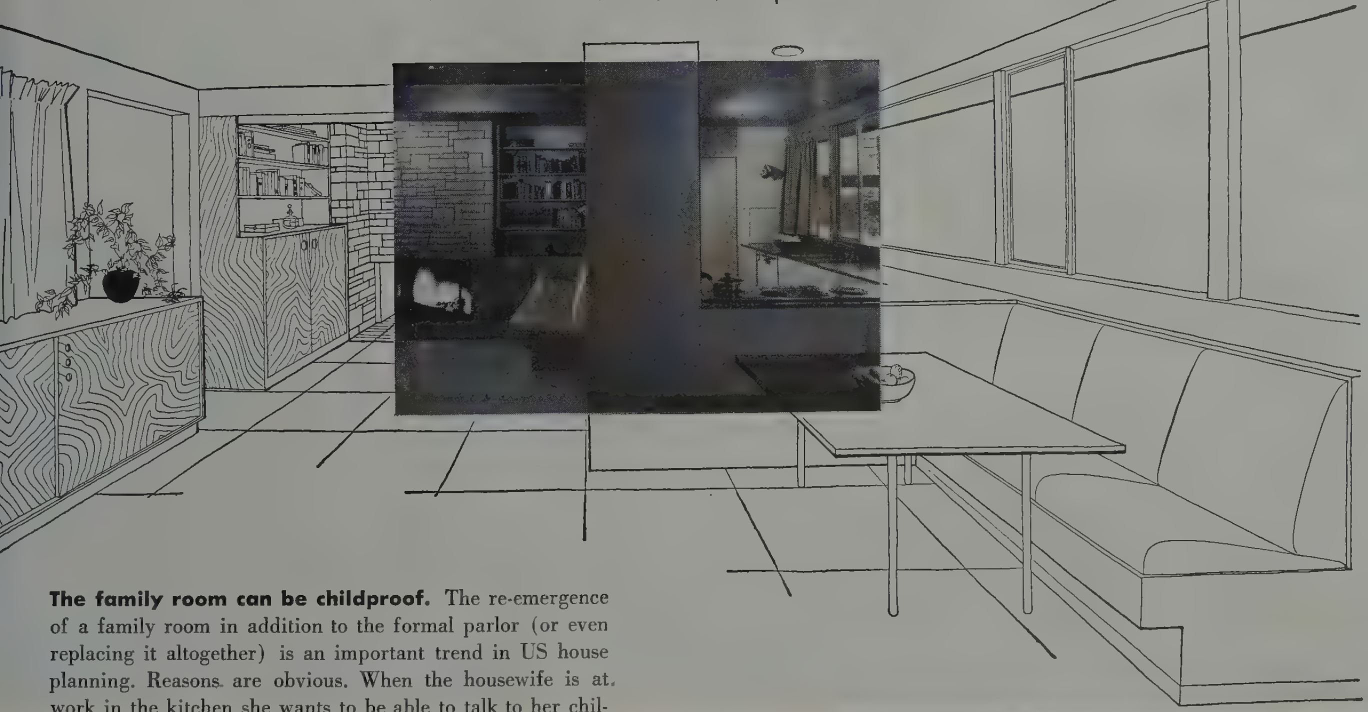


The kitchen is the nerve center *of this family room. It measures about 8′ x 12′, has an open counter with a stove top from which to serve the eating nook. The counter is closed off at one end by a shaft that contains the oven and an exhaust fan. The eating nook is as efficiently planned as a drugstore booth, with a leather bench under the window and no space wasted for moving chairs around or formal serving. Just beyond is a screened porch for outdoor meals.*

a multipurpose family room . . .

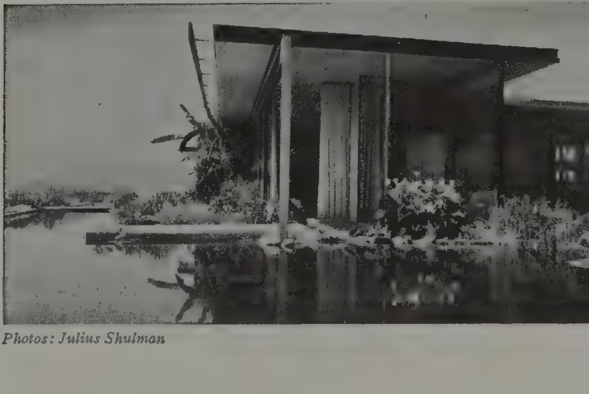


The family room has four zones: *Kitchen, eating nook, inglenook with leather bench and bookshelves, and work area with a desk, built-in typewriter stand and more shelves. Practically all daytime activity takes place in this 20' x 20' area. A laundry adjoins the kitchen, and a dining room is beyond the work area. The dining room is used for formal entertaining only, as is the big living room to the south of it (shown on the next page).*



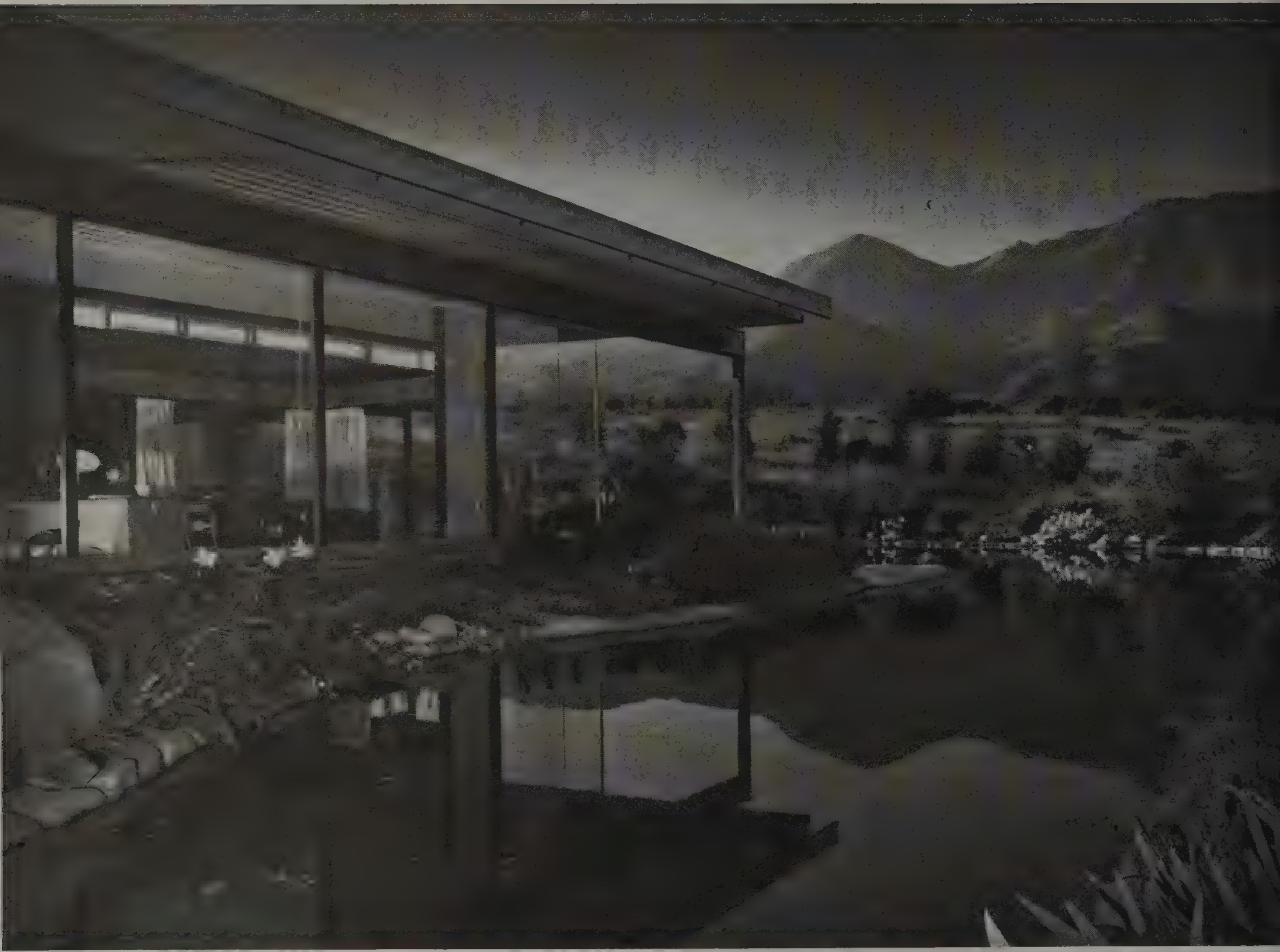
The family room can be childproof. The re-emergence of a family room in addition to the formal parlor (or even replacing it altogether) is an important trend in US house planning. Reasons are obvious. When the housewife is at work in the kitchen she wants to be able to talk to her children, watch them at play or doing their homework or reading their books—without having to worry about whether or not they are going to spill ink on the carpet, break a precious vase or disarrange the furniture. The children, in turn, want to have a living room in which they don't have to tiptoe around. For these reasons the development of the family room has become of prime interest to US architects; and few have studied the problem as well as Richard Neutra did it in this compact 20′ x 20′ space.

So successful is this family room that Mr. and Mrs. James D. Moore, Jr., for whom he built it, spend more time in it than they do in the rest of their spectacular house. For details turn the page.



Photos: Julius Shulman

. . . and builds a lavish house around it

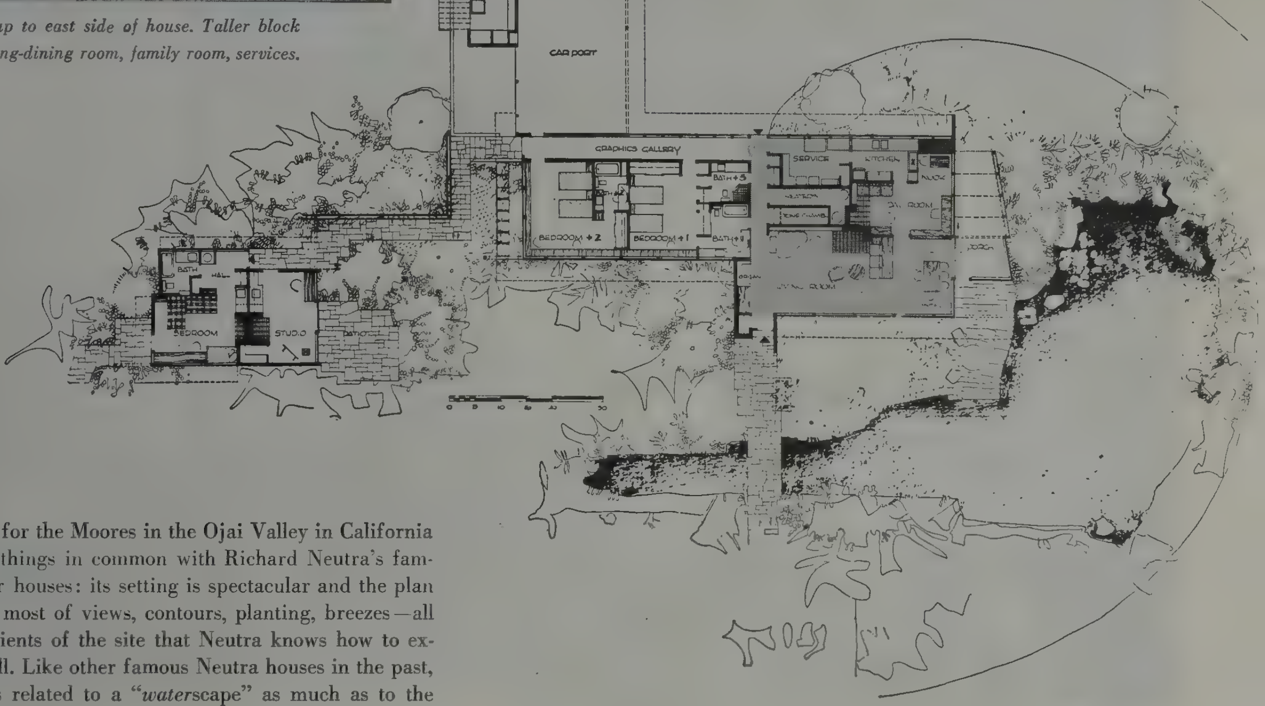


Photos: Julius Shulman

View across pool into living room. The Moore house is the center of a ranch located in the subtropical landscape of the Ojai Valley.

Over-all view of Moore house shows extended wings; detached studio in foreground.

Steps lead up to east side of house. Taller block contains living-dining room, family room, services.



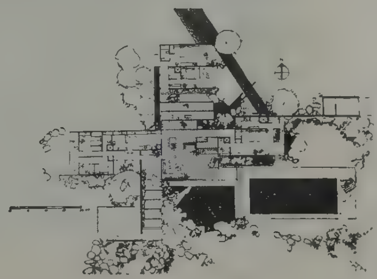
The house for the Moores in the Ojai Valley in California has many things in common with Richard Neutra's famous earlier houses: its setting is spectacular and the plan makes the most of views, contours, planting, breezes—all the ingredients of the site that Neutra knows how to exploit so well. Like other famous Neutra houses in the past, this one is related to a "*water*scape" as much as to the *land*scape—and (again as in the past) the result of this planning-with-water is spectacular.

All these devices are part of Neutra's art. They are strikingly documented in the photographs on these pages, and on the cover. What the camera cannot show is Neutra's planning principle—a principle as much rooted in practicality as it is conceived in romantic mysticism.

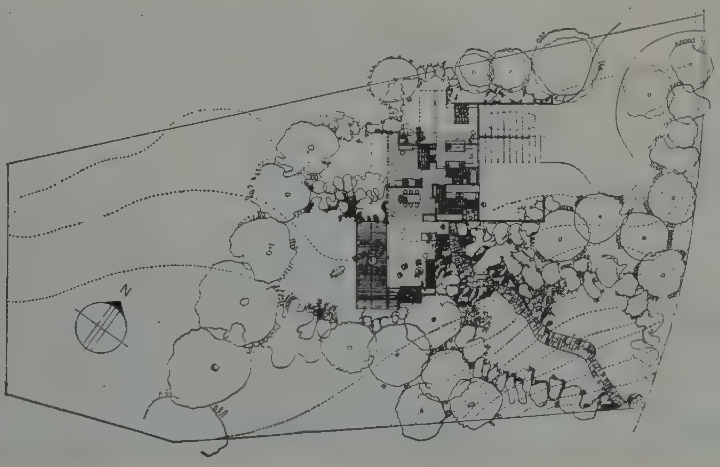
On the face of them, no two Neutra houses look alike. The reasons are obvious: a man so fascinated by the "mystery of the site" would never put up the same house in a canyon and in the desert. But upon closer analysis, Neutra's plans betray a fascinating family resemblance.

The basic Neutra plan has a central unit—often a square—which contains an efficient concentration of the principal services (kitchen, utilities, etc.) plus the living-dining area. Not infrequently, that central unit is quite similar to the typical square, two-bedroom builder house. Neutra will now take this central unit and shoot out one or more wings from the square core. These wings may contain bedrooms, guest rooms, service or other areas demanded by the program; more likely than not, the wings will be low-slung so as to give architectural dominance to the high-ceilinged central unit.

The philosophic base of this plan is a fascinating mixture of mysticism and eminent practicality. The mystic notions are that the organic building has a heart—a heart made up of the ancient elements: fire, water, and earth. Neutra's central units are in turn centered upon the hearth, and Neutra likes to bring water and rock or planted earth right into the heart of the house, close to the fire.



Two earlier Neutra houses show organization of plans around central unit, wings extending pinwheel fashion in one or more directions. Above: Palm Springs house; below, house in Los Angeles



Glass wall in the living room has hinged ventilating panels under the sill.

View from formal dining area into living room. Organ console is visible recessed into end wall of living area. The organ loft adjoins the fireplace.

Photos: Julius Shulman

And then, from this heart Neutra will extend low-slung roof-planes that carry the eye toward the distant horizons—originally, in the first days of modern architecture, it was Wright's prairie horizon; now, the frontier has moved farther west, and the horizon is that of Neutra's beloved California desert, with the distant Sierras.

But romantic mysticism is not the only source of this plan: obviously a house so designed can be built in expanding stages; obviously, too, a house with a communal core makes for good circulation; finally, the wings that extend in all directions create many pleasant terraces for many kinds of outdoor living, and each wing and each terrace will have a different kind of view.

The Neutra plans on *p. 77* demonstrate how flexible this basic principle turns out to be, how it can be adjusted to many different site conditions, how it can be applied to the smallest house and the most lavish mansion. In this Ojai house the central-unit plan contains, in addition to the

Left, Ojai Valley as seen from dining room, across porch and pool

family room already described, a big living room in which Mrs. Moore likes to give musicales (she is a harpist herself, included an organ in her requirements for the living area). Finally, there is a dining area used for formal entertaining. The living–dining room overlooks the pool to the east through a wall of fixed glass (with ventilating panels under the sill) and has a view of the mountain ranges beyond.

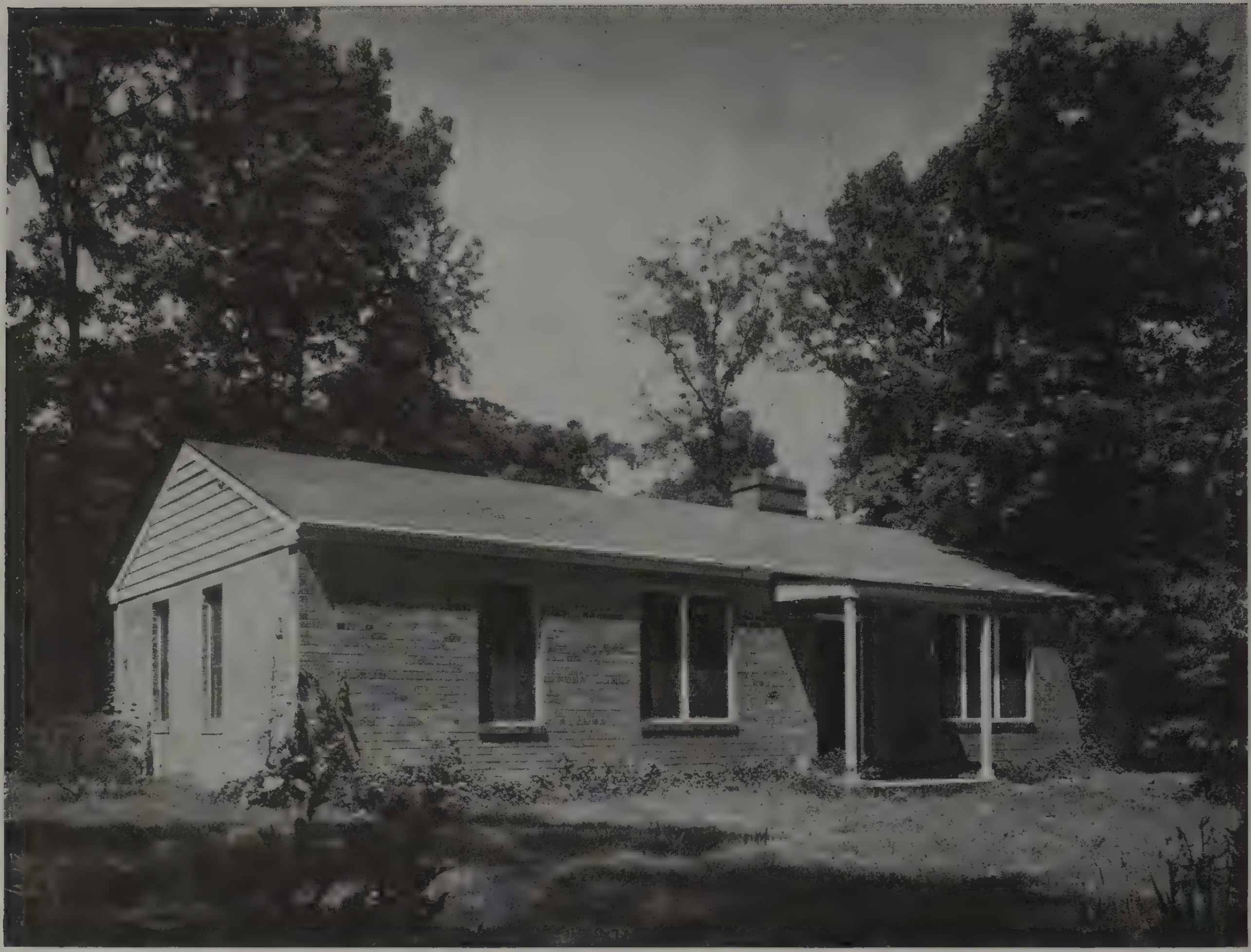
From this virtually square, central unit Neutra has shot out a bedroom wing toward the south, and a carport projects to the west out of that bedroom wing. Finally, to the far south, there is a detached studio building used by the Moores' daughter, who is a painter. A pergola links the studio to the main house.

The architectural pattern that results from this type of decentralized plan covers the surrounding gardens and terraces almost like a grid of map-coordinates, gives the profuse planting an orderly coherence—but without forcing it into rigid, classical, flower-bed arrangements. This taming of the landscape is a much more subtle process than that employed by the classical landscape designers, for there is no clear dividing line that separates man-made landscape from Nature's spectacular improvisation. The planting becomes gradually—*very* gradually—more formal as it gets closer to the building proper, until, finally, the transition from the outdoors to the formal indoor architecture is made without a noticeable break.

Much of Neutra's work—like that of most other modernists—owes something to the pioneer designs of Frank Lloyd Wright at the beginning of the century. What makes Neutra's work so easily recognizable and so clearly original, however, is an ingredient that he added to what he learned from his one-time master: a clean-cut, rectangular geometry—something Wright might abhor. To Neutra, however, this clean-cut geometry is the *sine qua non* that makes standardization of industrial building parts possible; and because Neutra's grid is geometric and rectangular, his houses—with all their romanticism and mysticism—are essentially of our time.

Below, paved walk from studio building to main house

Bedroom at south end of house has view of horizon through band of glass



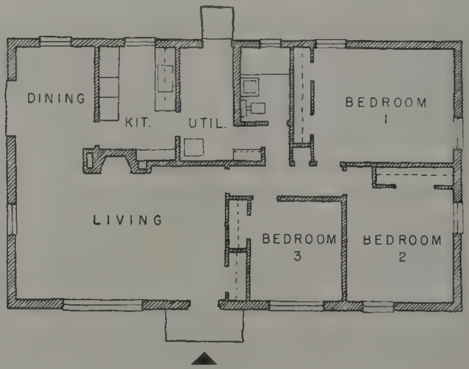
Photos: Robert C. Lautman

BEFORE—*Typical house in Tauxemont subdivision before remodeling was a boxy structure, built of either brick or concrete block. The 1,180 sq. ft. floor plan had poor circulation through living room, main window looking on street, and dining, kitchen and utility spaces broken up into inconveniently small spaces.*

What's wrong with this house? Why did it have to be remodeled before it was 12 years old?

A house that is planned right should last a generation before it has to be made over. The only time remodeling is cheap is on the drawing board before the house is built.

If this house had to be modernized so soon, what about millions of builder houses almost exactly like it that are still being built? Are they ripe for remodeling before they are sold? If so, might it not be better to change the model while it can still be done with ink and paper instead of with wood and brick?



A CAUTIONARY TALE

FOR BUILDERS

Seven case studies in how to bring a small house up-to-date—preferably *before* or if necessary *after* it has been built

Remodeling usually means doing over an old-fashioned house—the kind of house no one would build today. It means modernizing a house that is either too old or too big—too old to offer today's new comforts and conveniences or too big to suit today's changed way of life. It means doing something to a colonial farmhouse, or a Victorian white elephant, or a *nouveau-riche* château.

But for this remodeling none of these reasons holds true. The houses are not too old—they were built in 1940-41. They are not too big—only 1,180 sq. ft. They can hardly be called old-fashioned, for they are just like 90% of the houses being built this year and perhaps even a bit above the 1952 average in plan, construction and design.

So for any merchant builder who says "I give them conventional because that's what they want" it may be an eye-opener to learn why family after family was getting ready to move out of this development, despite its good location just outside Washington, despite its large well-treed lots, despite pleasant neighbors and a pleasant community life with such advantages as a communal nursery school. They like the neighborhood so much that when architect Charles Goodman showed one of them he need not move to get what he wanted, it started a chain reaction which has already modernized the houses shown here, and will soon spread to others in the 55-house development.

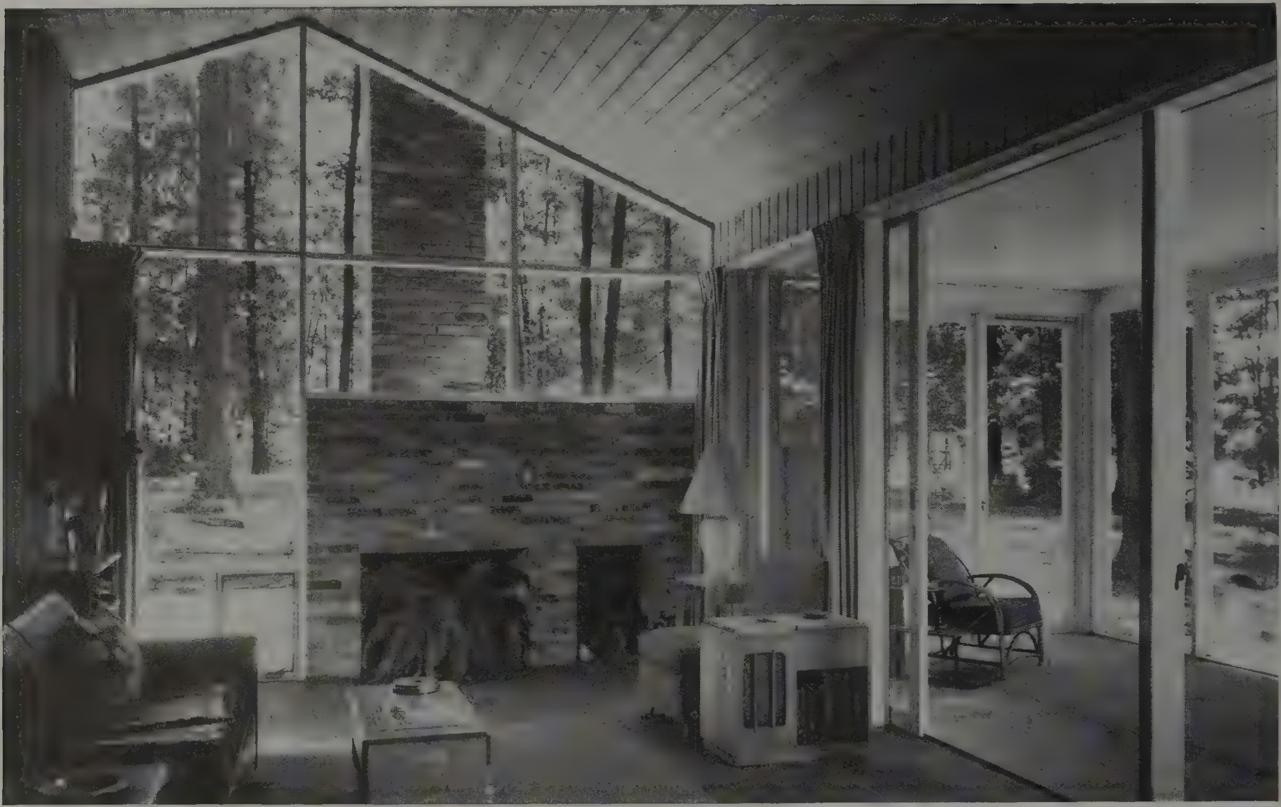
Why were the owners dissatisfied with their "conventional" houses? What more did they want? Every owner's answer was the same:

1. More light than the small windows could admit
2. More air and breeze for the Washington summer
3. Better orientation, both for privacy and comfort
4. Roof overhangs to shade the windows
5. More contact with outdoors to let them enjoy their trees and acre plots through the long warm season
6. An entry hall
7. An open work center (instead of walled-off tiny separate kitchens, utility rooms, and dining alcoves
8. A bigger living room, a living room planned for better furniture arrangement, a living room that would not have to do double duty as the main traffic artery.

All these advantages could have been designed into the houses before they were built at small extra cost and with little extra cubage. To add these advantages now costs most of the owners more than the original $6,500 price of house and lot combined, and in every case but one the house had to be made bigger. But the owners wanted these changes so badly they were willing to pay the price.

CASE STUDY NO. 1—$12,500 (1952 prices)

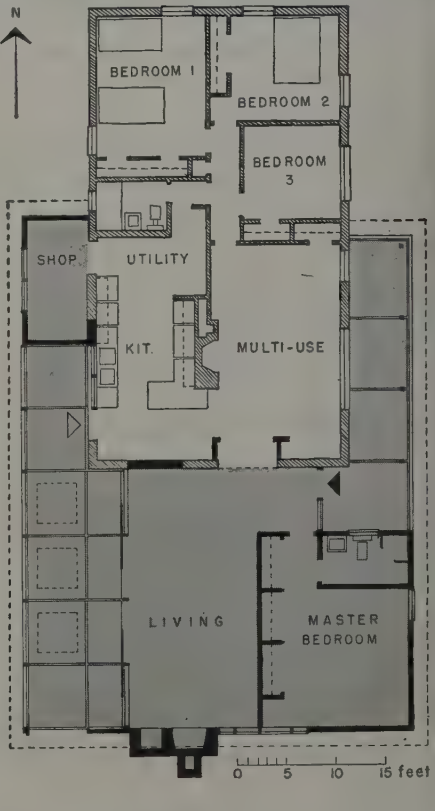
LOCATION: Alexandria, Va.
CHARLES M. GOODMAN, architect



New living area has free-standing fireplace, screened porch

Additions: a new living room, bedroom, bath, front and back porches and workshop. Remodeling: old partitions dividing dining, kitchen and utility rooms into small spaces were removed, kitchen realigned for space and convenience and $2,000 worth of kitchen cabinetwork added. Old living room now serves as multipurpose "family room" and children's play area.

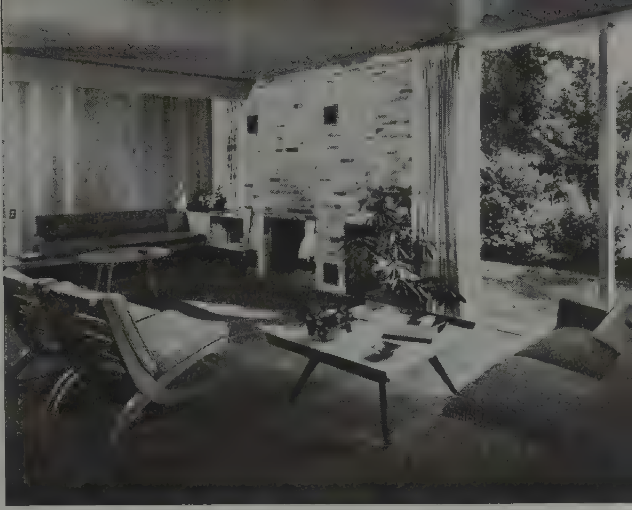
The new living room is what the living room of the original house *might* have looked like. It is just a little bigger—but many times more spacious. Through the glass end it is open to all outdoors, and the sliding glass walls make it easy to throw it open to the porch. Brick, fir siding and plank ceiling provide a warmth of materials lacking in the plain exteriors and white plaster interiors of the old house. *(New or remodeled areas are indicated in gray on all plans.)*



New gable end of glass lights living and bedrooms

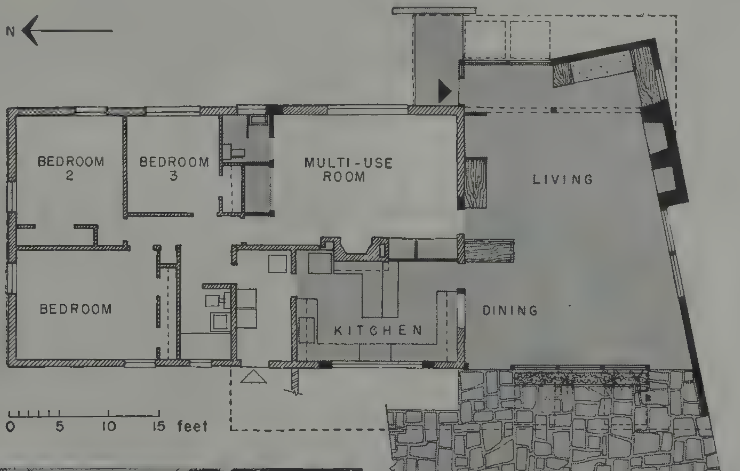
CASE STUDY NO. 2—$7,500 (1949 prices)

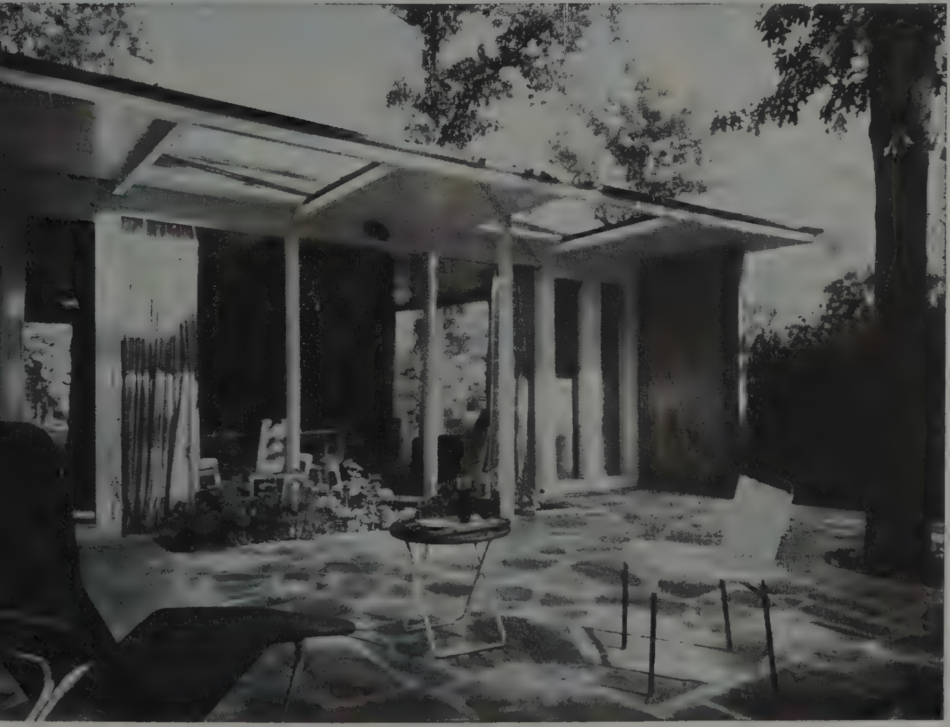
Additions: a new living room to the south, flagstone sun terrace to the west. Remodeling: kitchen extended into old dining area by removal of partition, addition of closet to keep it separate from old living room, which is now a multi-use room. Pass-through from kitchen serves dining portion of new living room near terrace. Old main entry *(top center of plan)* was boarded up, replaced with new bathroom and closet. Like the other renovated houses, this one now has an entry that is covered outside and arranged so that visitors do not burst into the middle of the living room. Canted wall of new living space is angled for best view; solid part extending onto terrace blocks view from neighboring house. Flagstone flooring is carried through living room to terrace to tie both together visually.



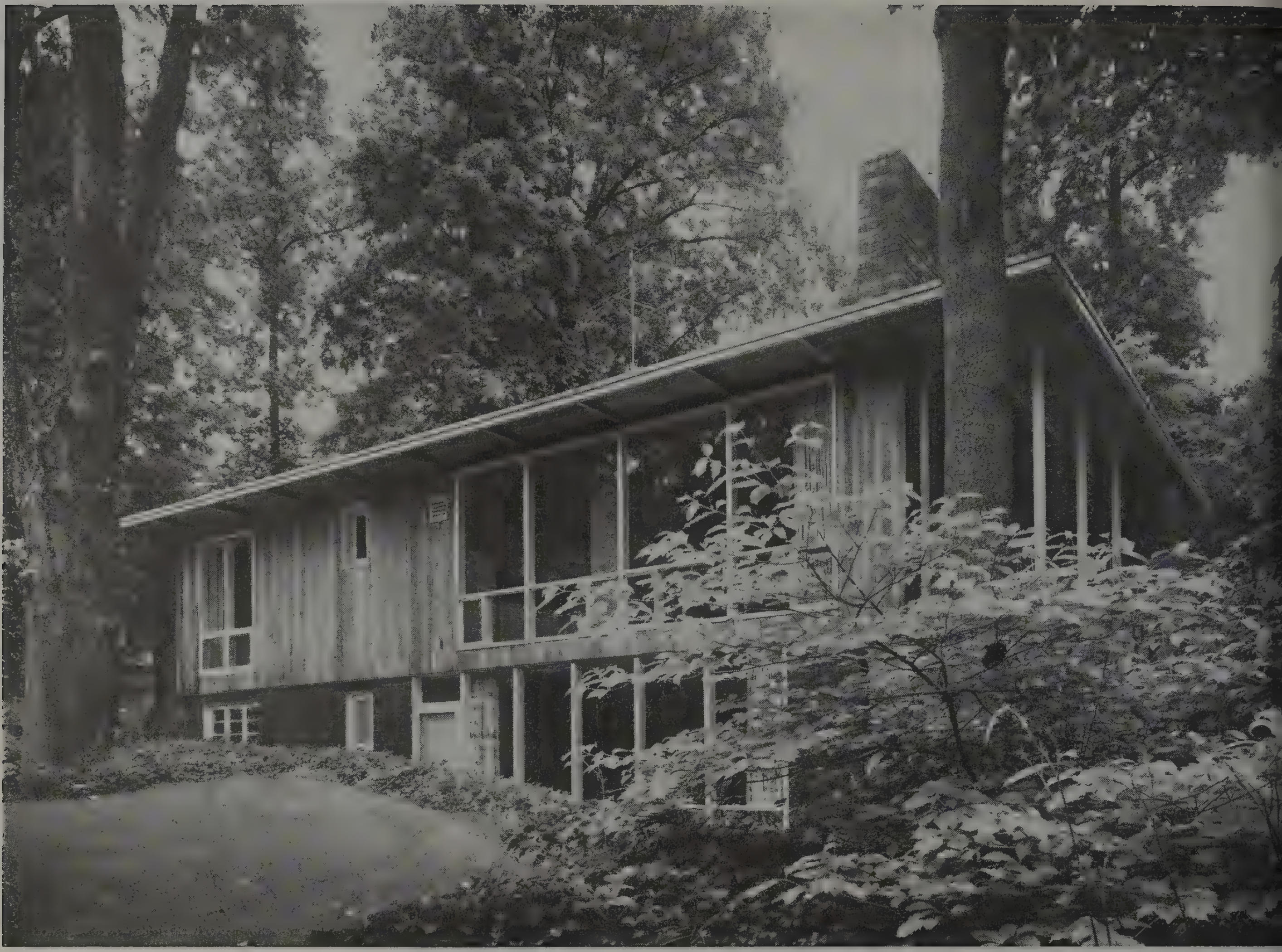
Living room opens through glass wall to outdoors

New living wing, left, ties into old house





Solid wall of the new living room extends to shelter-glass wall and adds privacy to the terrace. Wide overhangs cut glare, have openings to allow sun to fall on a planting bed which parallels the glass wall.



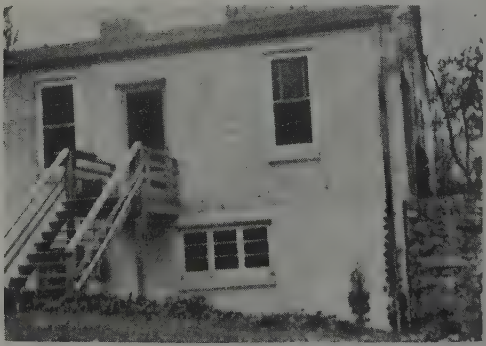
AFTER—*Remodeling opened-up living room, added roof overhang. Cellar became a playroom with floor-to-ceiling glass.*

CASE STUDY NO. 3—$10,000 (1950 prices)

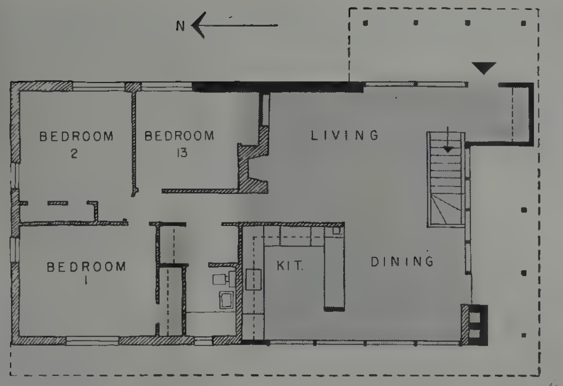
In this house, one of the few in the subdivision with a full basement, it was possible to provide almost all the desired modern features *within* the shell of the old structure.

Additions: small entry hall and closet, entry porch, living-room porch and fireplace, wide roof overhang. Remodeling: kitchen opened up, stairs to basement replaced by closets between bath and bedroom and placed more conveniently near front door. Bedroom behind chimney enlarged by bricking up old front entrance and replacing it with a new closet. Basement, previously one big storage space, was transformed into a playroom and second living room opening through new glass wall and door to flagstone terrace. Cool in summer, this room is in constant use. Next to it are separate storage-heater space, new bathroom and rough-in for a bedroom to be built in the future.

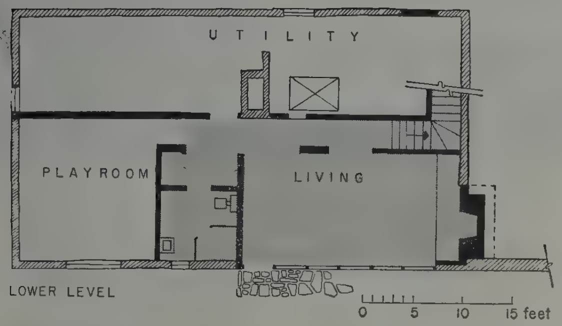
West facade, above, shows striking change brought about by extending glass walls from ceiling to floor between 3″ x 6″ structural mullions 3′ o.c. Concrete block exterior was either painted or covered with vertical redwood siding.



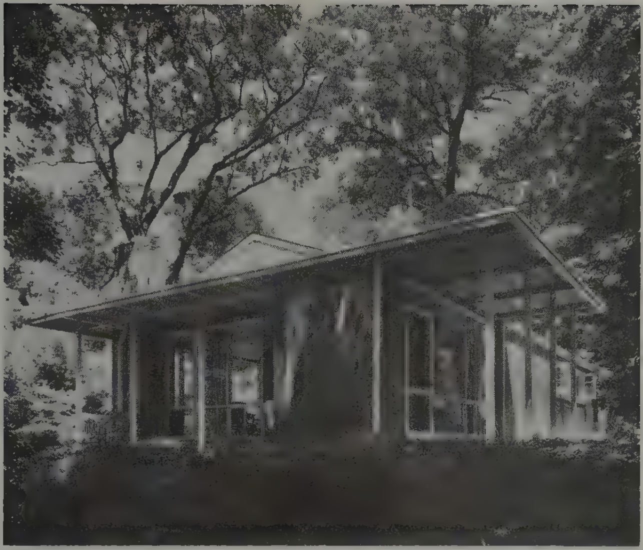
BEFORE—*Rear had drab kitchen entrance, small windows*



UPPER LEVEL

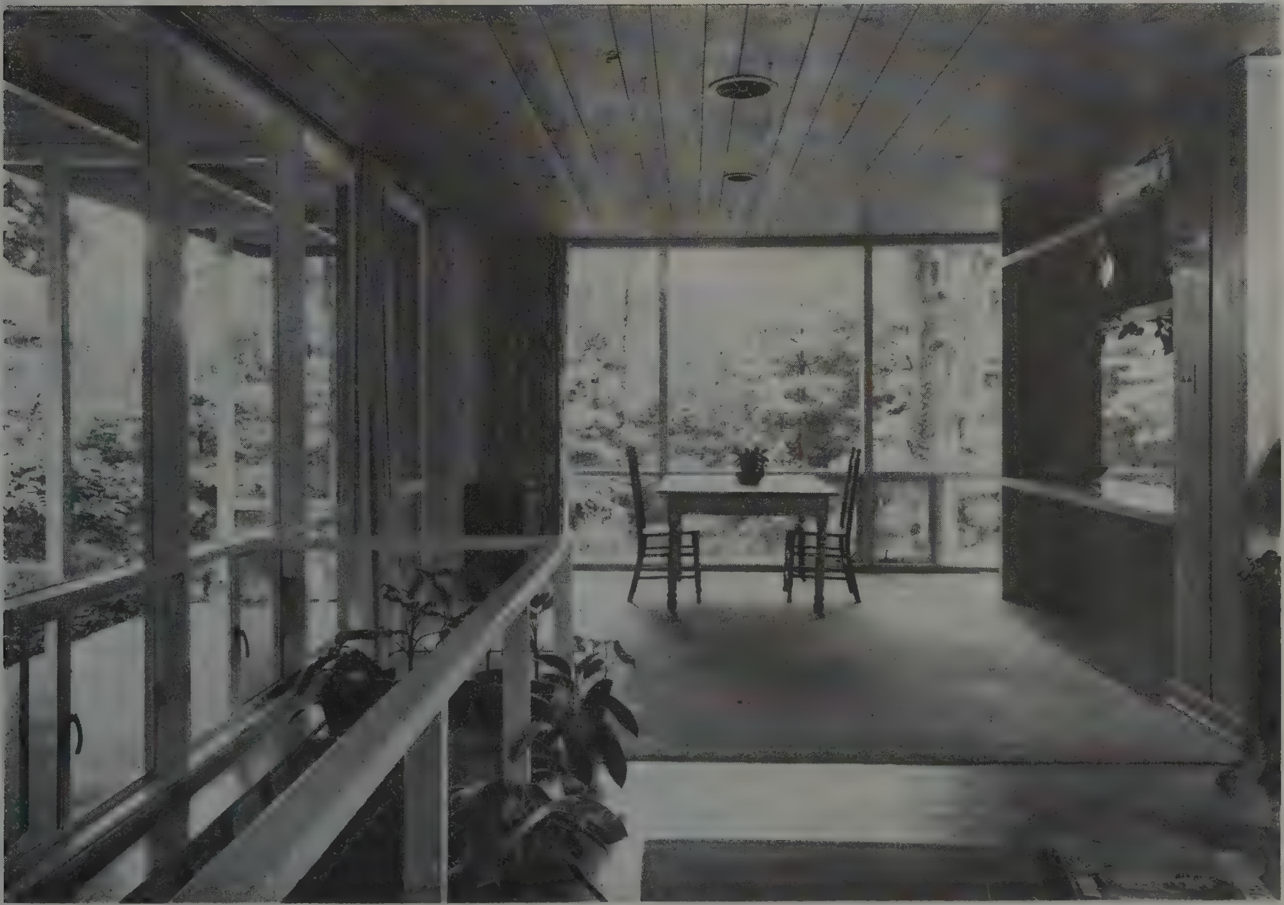


LOWER LEVEL



Entry was moved from middle to end of plan, given a covered porch, wide glass area, at right in photograph above, to light living room, and a separate entrance hall.

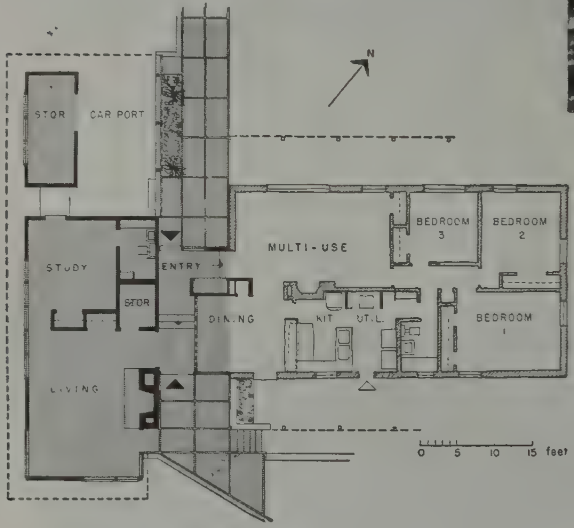
Living-dining area, seen from entry, shows new stair to basement, full glass walls, new plank ceiling. Big pass-through counter opens the kitchen to the dining area.

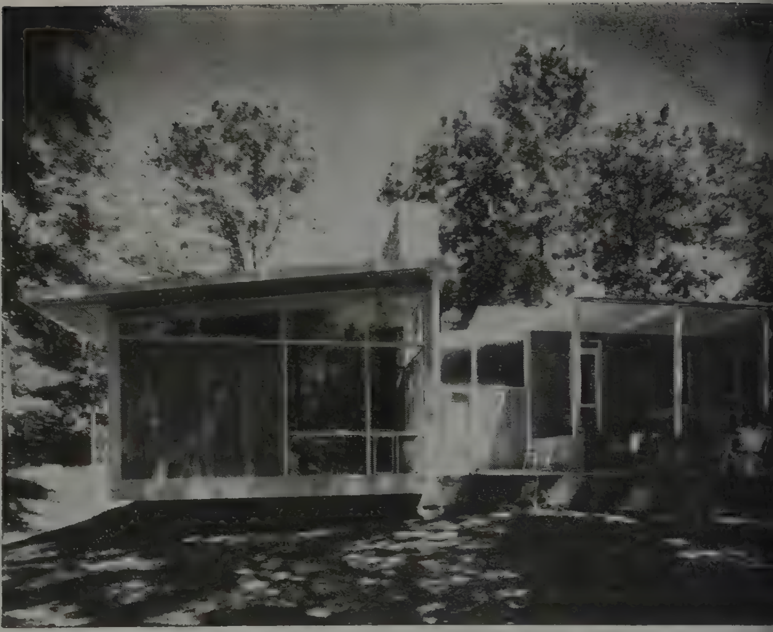


CASE STUDY NO. 4

—$17,000 (1952 prices)

In this, the most expensive of the seven renovations, the size of the original house was nearly doubled. Additions: new living room, study and bath, terraces, carport and storage. Two porches, with flagstone paving and roofs 7′ wide, were grafted along the full length of the old house. Remodeling: inadequate dining area enlarged, window substituted for old front door, kitchen enlarged and rearranged. Note how old living room (now a multi-use and children's playroom) faced north and toward street, whereas new living room faces south and west for sun, breeze and garden view. Separate entrance hall, with access from either side of plan, serves as a link between old and new house.



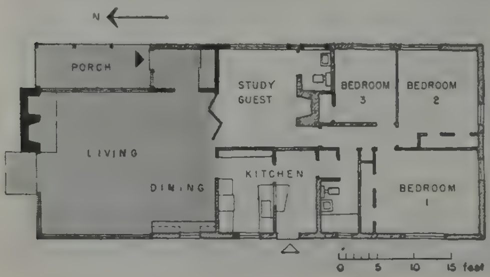


New living room, left, faces through corner windows to outdoor living spaces. Rear entry, center, links new wing to old house. Door was cut through from old dining room so that the owners could dine on newly landscaped terrace.

CASE STUDY NO. 5

—$4,000 (1948 prices)

Here is another case of inadequate living space that made a living-room extension necessary. The entire end wall was torn out and 15′-6″ more length added to the south. Entry porch, hall and closet were cut into one side of the addition; old entrance was boarded up and replaced with a second bath. Folding doors divide new space from old living room, which is now used as a study or guest room.

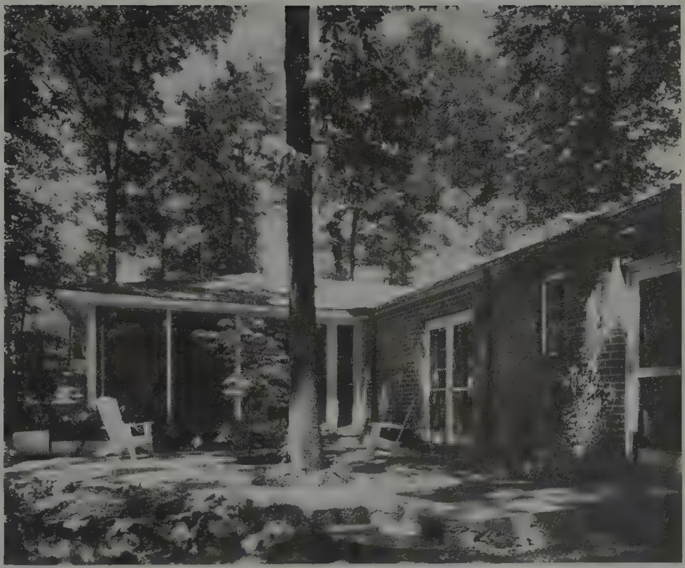


Addition ties into roof line of existing house (at left in picture below). Covered entrance porch is a much-needed innovation. Ceiling-high, 10′ wide glass wall has "safety" mullions, like a low railing, running at 2′ height.

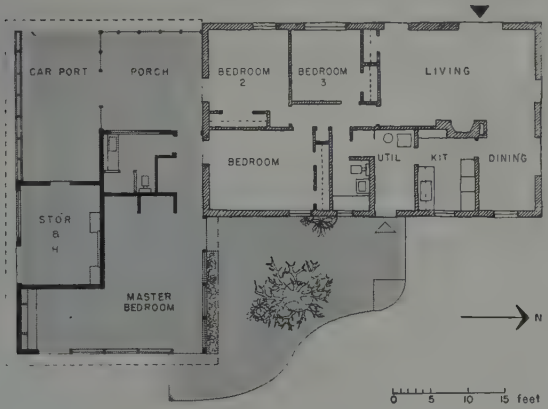
CASE STUDY NO. 6

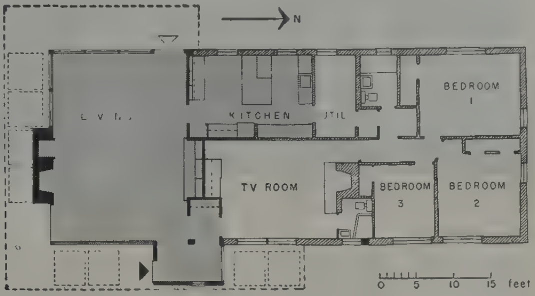
—$4,500 (1949 prices)

This remodeling illustrates a slightly different approach: adding a new master bedroom and bath, plus a screen porch, carport and storage-heater space. The owners originally wanted the new bedroom to be larger but decided to cut their plans to fit their budget so that they would be able to enlarge the living room at the opposite end of the house as soon as the present addition is paid for. Note the difficulty of getting to the master bedroom, due to the fact that this standard builder plan is not expandable. A poor original plan can be costly in many ways.

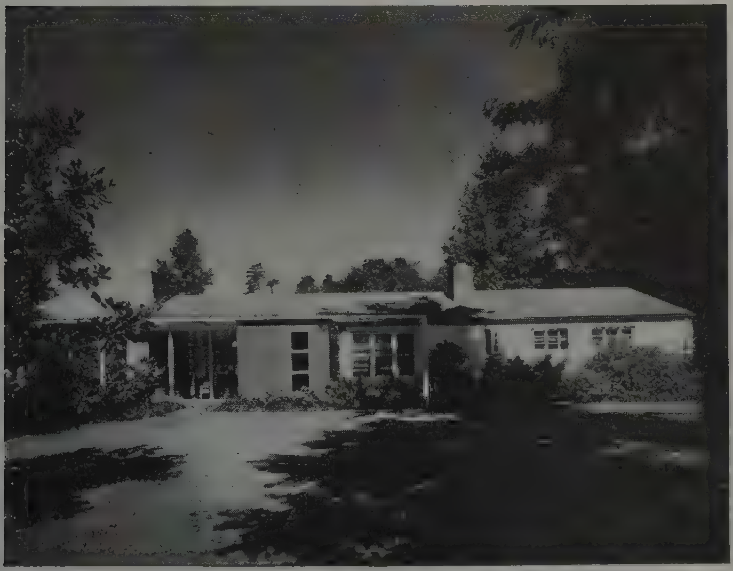


A major gain in this remodeling is the way the new wing shelters an outdoor living terrace. New double doors in a bedroom of the old house help to link the two wings.





New wing, below, blends into old house almost imperceptibly; 6' wide porch roof, pierced with squares open to the sky, sweeps around three sides of the plan. Vertical trio of windows lights new entry hall.

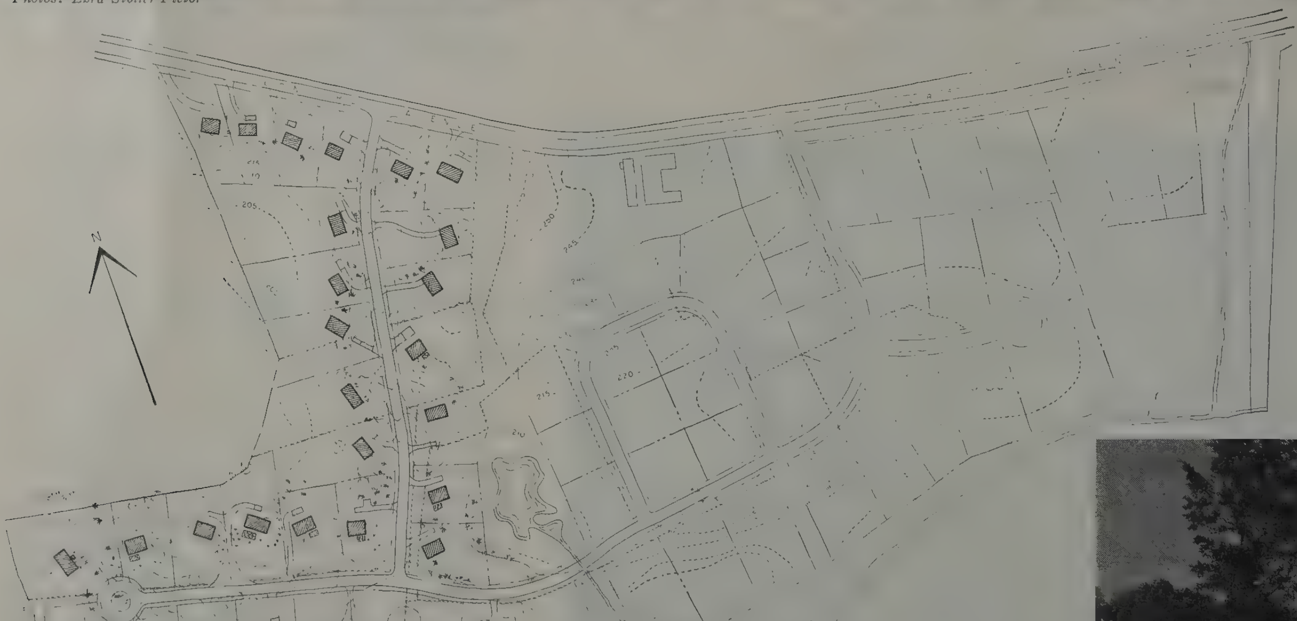


CASE STUDY NO. 7

—$6,000 (1948 prices)

The lines of the existing house were extended to the south 18'-6" to provide additional living space enclosed by glass on three sides. Former entrance was turned into a high window for the new bath; box of fir planks added to side serves as new entry hall with access to new and old ends of house. Old living room is now used primarily for TV and record-playing. New built-in unit in center of plan has desk and bookcase on one side, closet and shelves on the other. Partition separating kitchen and dining was lowered and bridged with a counter to enlarge kitchen, which has been remodeled to accommodate new cabinets and a built-in seat.

Photos: Ezra Stoller-Pictor



Architects turn merchant builders

produce a model community of well-designed houses

What happens when a front-rank group of architects turn merchant builders on their own account instead of waiting for some builder to employ them?

Here is a tract development, Five Fields, sponsored by The Architects Collaborative (TAC), one member being Dr. Walter Gropius, founder of the Bauhaus, Dean of Architecture at Harvard, crusader for more active architect participation in building. And in a special way it is a considerable success.

Five Fields is quite different from the same architects' custom-built colony nearby at Six Moon Hill, where they tried to achieve rural domesticity with the International Style which characterizes most of their work (like their beach house shown for contrast on page 94). Here they have gone semiconservative and given distinction to what builders might call "the ranch house style with a low pitched roof."

Five Fields is also quite different from any merchant-builder venture—so different that at first glance some builders might be tempted to shrug it off as "not practical." Actually it is so different that smart builders who take a second look will almost certainly find more than one lead they will wish to follow.

Here are a few of the points of difference:

1. Styling is much smarter than in 99/44-100% of developments—crisp, direct, simple. The simplicity may look easy, but don't be fooled. It is the simplicity which comes only from the most careful detailing and the most careful thought for the coordination and combination of design elements.

2. Lots are bigger—never less than 1/3 acre for the $15,000 model, sometimes over an acre for the $20,000 house.

3. All the old trees were saved so the new development already looks as if it had been standing there for years. Additional planting gives each house privacy from its neighbors. Instead of formal lawns the fields between houses are left as they were.

4. All houses are carefully sited for view.

5. All houses are oriented to southern sun and breeze (instead of being set in rows parallel to roads).

6. All houses are tailored to the site, with a one-floor plan for flat ground, a split-level plan for gentle slopes, a two-level plan for steep hillsides.

7. All houses turn small windows to the road, but open up wide toward the view, with bedroom and living-room glass often running from wall to wall and floor to ceiling.

8. All houses are so open and so simple that they seem much larger than they really are.

9. Curving roads and culs-de-sac give children more traffic safety and everyone more visual variety of over-all scenes.

10. A 20-acre strip bisecting the 80-acre community was set aside as common land for all the residents. Among its pleasant assets are a small pond and an old barn left standing for possible conversion into a community building with nursery school.

LOCATION: Lexington, Mass.

THE ARCHITECTS COLLABORATIVE: Jean Bodman Fletcher, Norman Fletcher, Walter Gropius, John C. Harkness, Sarah Harkness, Robert McMillan, Louis A. McMillen, Benjamin Thompson; associate: Chester Nagel.

CHAMBERS & MORIECE, civil engineers

BOSSI CONSTRUCTION CO., contractors

Below, one of the two level houses faces south for view, summer breeze and winter sun. This plan type has three bedrooms, kitchen and living room upstairs, carport, playroom and storage in basement. Five farmer's fields separated by old stone walls gives tract its name—Five Fields.

Upper-story living room of this hillside house opens through glass to balcony and view

The architects-turned-builders were most successful, understandably, in providing better architecture. On costs their success is not so clear, for $15,059 is a stiff price for a two-bedroom, 960 sq. ft. basementless house—a price the architects justify on the basis of quality construction, plan variety, and small volume. On financing they achieved something most volume builders will envy—they got a 4% interest rate for their conventional mortgages from the local bank. On profits their success is modest. They expect to earn no more than their 5% architect's fee unless their $115,000 land investment shows a profit over development costs after the last house is sold.

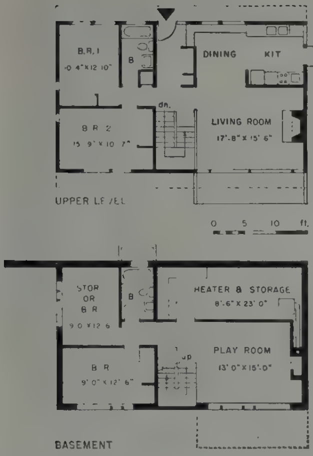
Since ground was first broken in June, 1951, 29 houses have been started and adjoining land lotted for 30 more. While continuing to take orders for new individual homes, the architects have built six on speculation and sold four of them already.

Fifteen thousand dollars for the 960 sq. ft. "A" plan *(see plan types")* is over $15 per sq. ft. to the buyer for house, lot and architect's fee. Of course, as more bedrooms are added to either the one-level basic plan or the two-level basic plan, the cost per sq. ft. comes down; in the biggest (C1) house, with finished basement, the buyer gets 2,448 sq. ft. of space for a little over $20,000, or a much lower price of $8-$9 a sq. ft.

COST BREAKDOWN of a typical house (two-bedroom A-1 plan, with unfinished basement), including 5% architects' fee, $300 planting allowance and improved $1,600 lot. (Three other lot types are priced at $2,100, $2,600 and $2,950.)

Excavation	$400
Backfill	100
Foundation walls	1,800
Concrete slabs	400
Wood framing and boarding	2,246
Exterior finish	1,700
Roofing	350
Interior framing	500
Millwork	1,400
Chimneys	500
Lath and plaster	1,000
Painting	500
Wood and linoleum floors	400
Plumbing	920
Heating	800
Electric	630
Water service	100
Hardware allowance	200
Septic tanks	200
Insulation	130
Contract price	$14,276
5% architects' fee	714
Improved "A" lot	1,600
Planting allowance	300
Price to purchaser	$16,890

(1951 price; costs now make selling price $17,204.)



Basic two-level plan may be expanded to side, or down by finishing big basement area. Below, main entry side presents small windows to street for privacy.

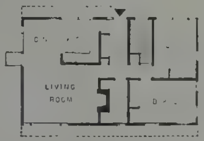
In the two-level house, shipshape stairs lead up from the children's playroom to the family living room, make supervising the young an easy matter.

Photos: Ezra Stoller-Pictor

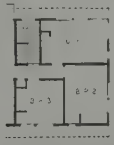
The basic one-story house, *built over crawl space, is offered in these two-, three- and four-bedroom plans (and their reverses). Good plan features:*

- *Separate entry has coat closet and a pass-through to the kitchen.*
- *"T" hall wastes little floor space, provides quick access to all rooms from center of plan.*
- *Circulation is not through middle of living, dining or kitchen areas; this means freedom of movement, freedom in furniture placement.*
- *Storage is provided in large heater room.*

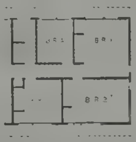
PLAN TYPES *(prices include 5% architects' fee, $300 planting allowance and $1,600 "A" lot)*



A. *Two bedrooms: $15,059 24' x 40' = 960 sq. ft.*

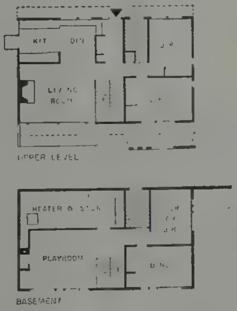


B. *Three bedrooms: $15,971 24' x 45' = 1,080 sq. ft.*

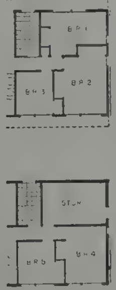


C. *Three or four bedrooms: $16,868 24' x 51' = 1,224 sq. ft.*

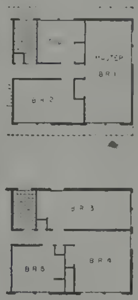
The basic two-level house *has much the same plan as the one-story types, below, with basement stairs replacing heater room, kitchen and chimney moved to the opposite side to permit more open planning through the center of the house. This type also is offered in two-, three- and four-bedroom plans and their reverses, with finished or unfinished basements. Plumbing for a future bath is roughed in directly under upstairs bath; finishing runs from $780 (for A-1 house) up, which includes wiring, plumbing fixtures, asphalt tile and interior partitions that divide basement into playroom, bedrooms, storage and heater rooms.*



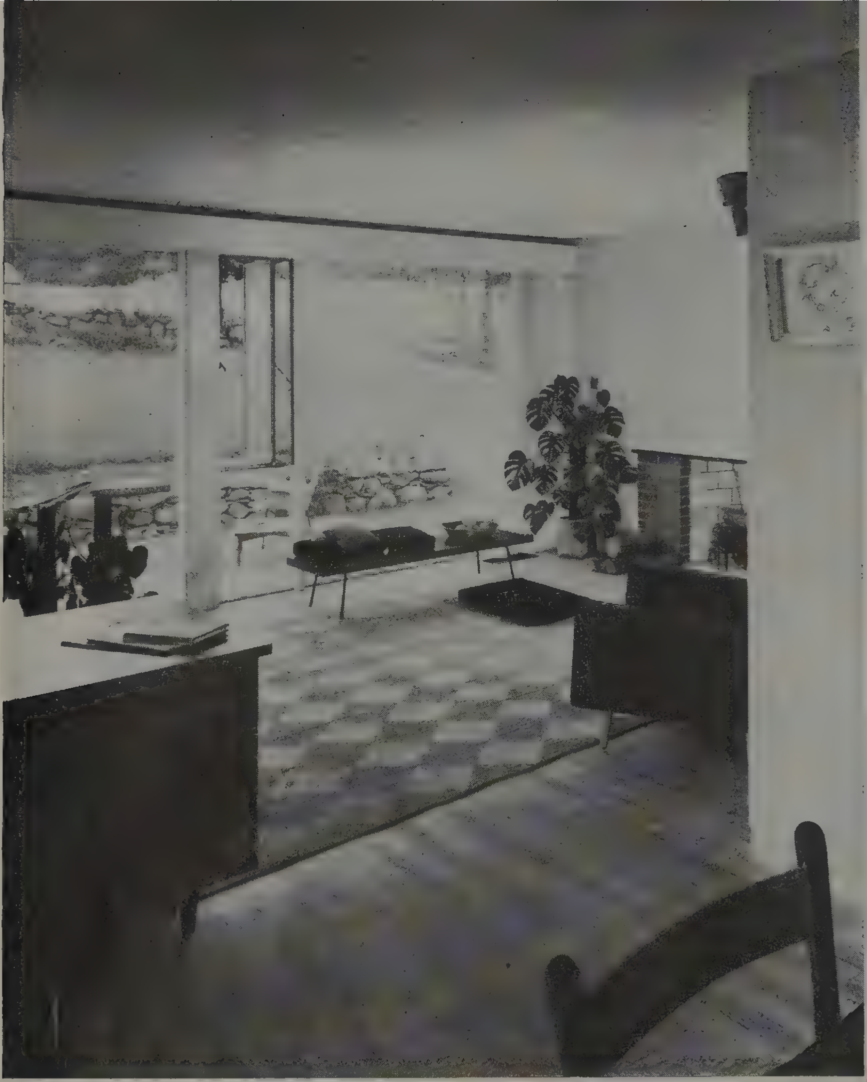
A-1. *Two bedrooms upstairs: $17,204 — 24' x 40' = 960 sq. ft. x 2 floors = 1,920 sq. ft.*



B-1. *Three bedrooms upstairs: $17,895 — 24' x 45' = 1,080 sq. ft. x 2 floors = 2,160 sq. ft. (An alternate plan with carport in part of basement sells for $17,795.)*



C-1. *Three (or four) bedrooms upstairs: $19,229 — 24' x 51' = 1,224 sq. ft. x 2 floors = 2,448 sq. ft.*



Living room *of this one-level house has big glass walls toward paved terrace and rural vista beyond, also borrows space from its dining area, (foreground). This model has enclosed kitchen at right. Standard framing is finished with plaster on walls, oak floor.*

Photos: Ezra Stoller-Pictor

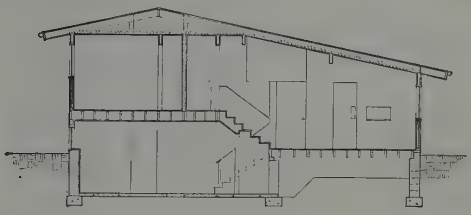
Bedroom, *with one whole wall a window, looks twice as big as it is. Proper placing of house on lot allows all this glass and privacy too.*

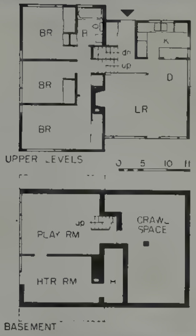
Five Fields houses are good examples of today's open planning and efficient room arrangement within a general house shape familiar to prospective buyers. Their appeal to buyers lies in generous use of glass areas and porches, warm natural materials and crisp detailing. One reason why pitched roofs were used: since most of the houses are on hillside sites, it might have detracted from the general appearance of the subdivision to look down on neighbors' flat roofs.

To keep labor costs down, the houses were designed for relatively standard construction: a frame of 2 x 4's 16" o.c.; interior partitions of nonload-bearing 2 x 3's, and 24' roof trusses site fabricated of 2 x 6's. TAC wanted the houses to last, so they kept jobs under close supervision, used above-average materials and methods: oak floors, oiled redwood siding, wet plaster walls and ceilings, metal vent sash and door bucks instead of wood. Exclusive of the largest glass areas, frames for two window sizes were milled on the job from TAC designs.

One of TAC's biggest construction headaches has taught them a lesson merchant builders learned long ago: don't be too lenient in allowing purchasers variations and "minor changes"; it makes design and building much slower and more expensive.

Plan variation: *opens shelves make kitchen part of living area, provide decorative storage for utensils, plants.*





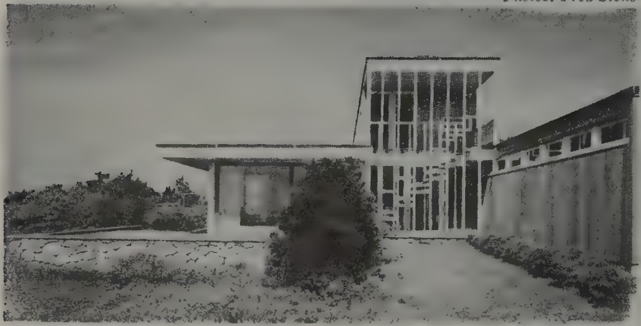
Split-level house—*$17,249—1,550 sq. ft., including 553 sq. ft. basement. From the basic one- and two-level house types TAC developed a third, split-level plan to give houses on flatter lots the same advantages of inexpensive, windowed basement space. With bedrooms half a story higher and a partial basement half a story lower than the main living areas, it is possible to finish the lowest level of this house as study, playroom, laundry and give them a wall of 3' high windows just above grade (see section left). Note plan advantages similar to other house types: separate entrance hall, convenient central and cross hall, living room looking away from road toward back of lot.*

For contrast—a custom house by TAC

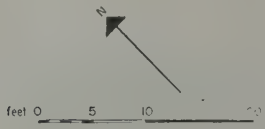
THE PLAN of this Cape Cod summer house reverses traditional procedure to get privacy and a view

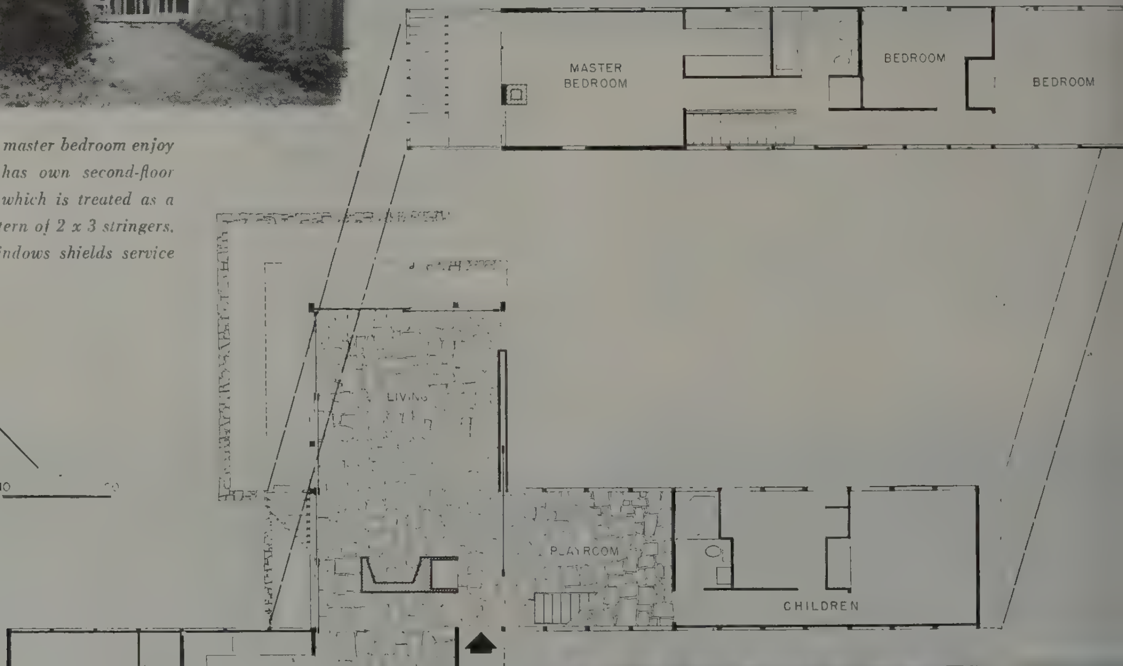
Photos: Fred Stone

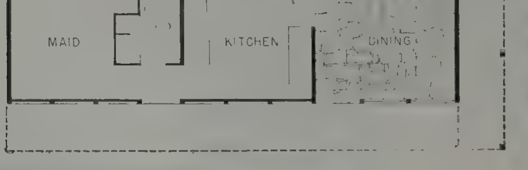
LOCATION: Cape Cod, Mass.
THE ARCHITECTS COLLABORATIVE,
Robert S. McMillan, job captain
CAPE COD CONSTRUCTION CO., contractor

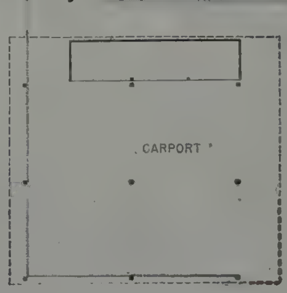


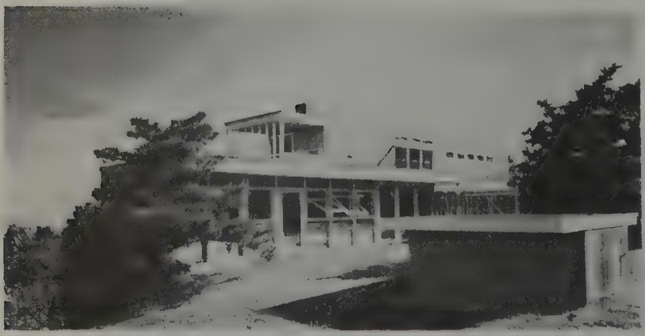
Living room, terrace and master bedroom enjoy main sea view; latter has own second-floor porch and outside stair which is treated as a decorative structural pattern of 2 x 3 stringers. Wall with high strip windows shields service wing at the right.



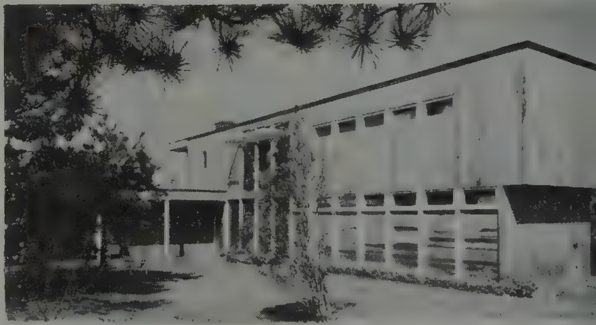




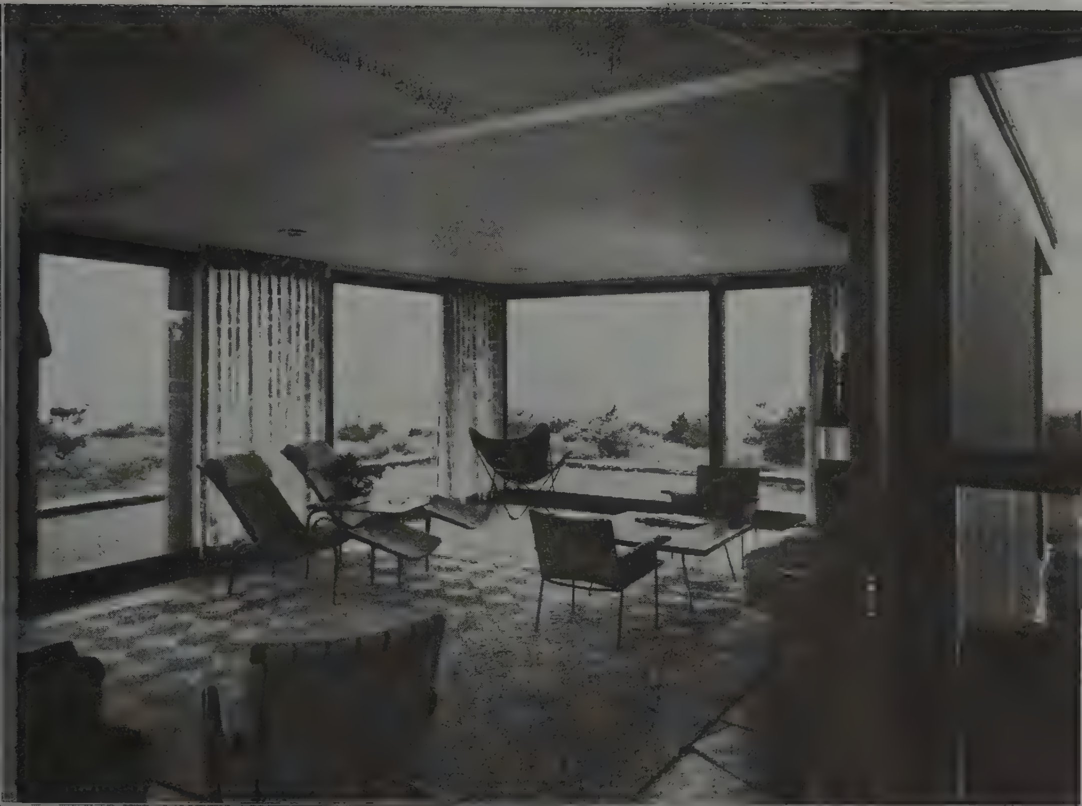




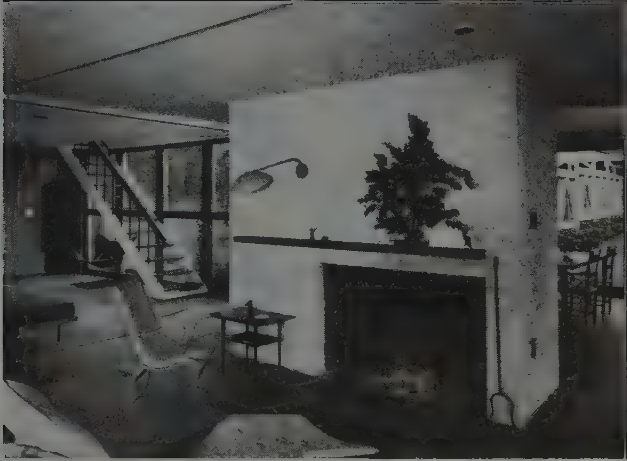
On opposite side of service wing, dining, kitchen and maid's quarters open to service yard, separated from carport by high fence. Shed in foreground is pumphouse.



On front of house facing road, bedroom halls on both floors are lit by high strip windows. Two-story window of insect screen gives light and cross-ventilation to stairwell, playroom, other living areas, can be glassed in with storm sash.



Sliding glass walls around two sides of living room open to terrace, sea view and breeze. A 12' opaque door (right foreground) slides out of a pocket in living room's one blank wall to close off playroom.



Free-standing fireplace of whitewashed brick takes the place of walls and doors to define spaces for communal activity: living (foreground), dining (right background) entry, and playroom (far left). Continuous flagstone floor ties areas together visually. Door opening at left leads to downstairs children's bedrooms, stairs to master, first and second bedrooms.

This contemporary house on Cape Cod has more in common with the old Cape Cod cottage than you might suspect. It could even be called a sympathetic 20th-Century variation of that ancient theme.

The original was a tightly enclosed box, a "four-corner" plan ranged around a central fireplace. It was a winter house, so it was designed to offer snug protection against buffeting winds. This is a summer house, so TAC has turned the prototype inside out.

Like the original, this house is divided into four sections, with the fireplace at its heart. It was planned for economy, here achieved by a simple structure of wide-spaced posts and beams and a single thickness of 1" lumber that kept the total cost under $25,000 for 3,000-plus sq. ft. of space.

Unlike the original, the new house has a ranging plan, with an open terrace in each quadrant instead of a closed room to suit contemporary living patterns: most people today work indoors, play outdoors; our forebears worked in the open, relaxed indoors.

The plan *(opposite)* accomplishes four things: 1) it isolates living, service, children, car storage in four distinct wings which radiate, pin-wheel fashion, from the hub; 2) it groups the most used communal rooms nearest the center, convenient to one another, to front door and stairs; 3) it makes the house one room thick at all points for maximum sea-breeze ventilation and views through wide window areas; and 4) it splits up its plot into four separate quadrants.

These four outside zones are shielded from one another and from dissimilar indoor functions by sight barriers: fences, solid walls, walls with only high strip windows. Opposite each such solid wall, doors and window walls open the indoor space to its outdoor counterpart (e.g., living room is walled off from the children's play yard, instead looks out to its own terrace and sea view). **The structure is simply a cage** of 4" x 4" posts on a 4' module, their spaces filled with glass or sheathed with a single wall of 1" x 4" T & G cypress siding, nailed horizontally or vertically to the inside or outside of the posts. The cypress weathers well and sea moisture keeps the V-joints swelled weather-tight.

Price was cut to under $10 per sq. ft. mainly because:
1) fewer structural members and wall layers meant faster erection, less labor, 2) only insulation is 3" of fiber insulation board under the tar and gravel roof, and 3) only heating is a floor furnace under the stairs to take the chill off both levels on crisp days.

FRONTIERS IN AMERICAN PAINTING

Photos: *Julius Shulman*

At the entrance, the slim columns and light steel stairway form a linear, red-orange pattern against plaster walls.

LOCATION: Los Angeles, Calif.
CRAIG ELLWOOD, designer
ECKBO, ROYSTON & WILLIAMS, landscape architects
HENRY SALZMAN, general contractor
MACKINTOSH & MACKINTOSH, consulting engineers

ELEGANCE AT $9.87 a sq. ft.*

The custom-designed houses shown on the next eight pages have a lot to say about two subjects which are rarely mentioned in the same breath—economy and elegance.

Except for their steel posts, there is little that would run up even a volume builder's costs. Yet they achieve a simplicity and distinction usually found only in very expensive houses. That elegance is one good reason the two smaller houses (p. 102), built for only $15,110 apiece, have been rented month after month for $500 (or $6,000 a year). It is a good reason why this house, built for $18,500 (plus $6,500 for land and landscaping) has been appraised at $29,500.

The figures come as no surprise to Craig Ellwood, the young designer of the houses. They are the result of six years' work aimed at building exciting structures at reassuring prices. He is now so confident of his cost-control system that he writes a top-price guarantee into his standard design contract.

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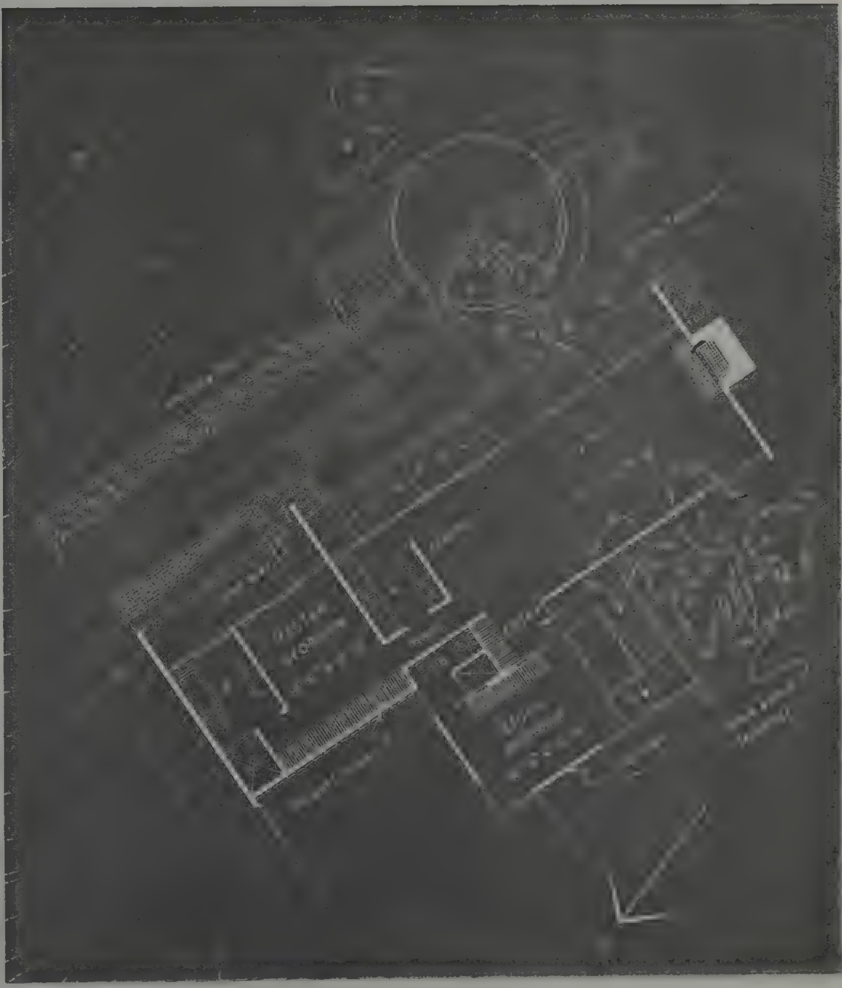
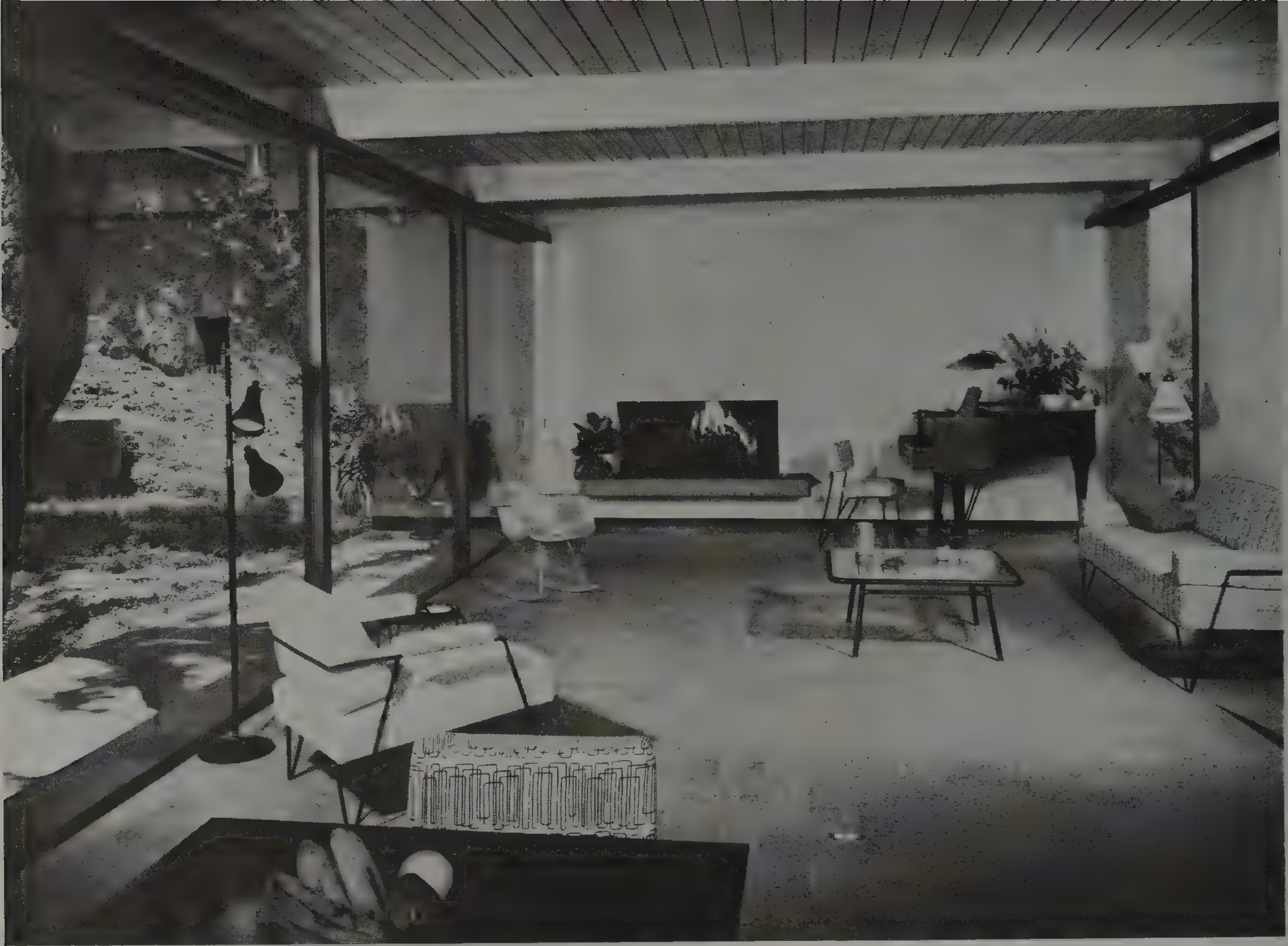
* Figured at the customary 50% for covered entrance, carport, terrace but excluding land, landscaping, design fees.

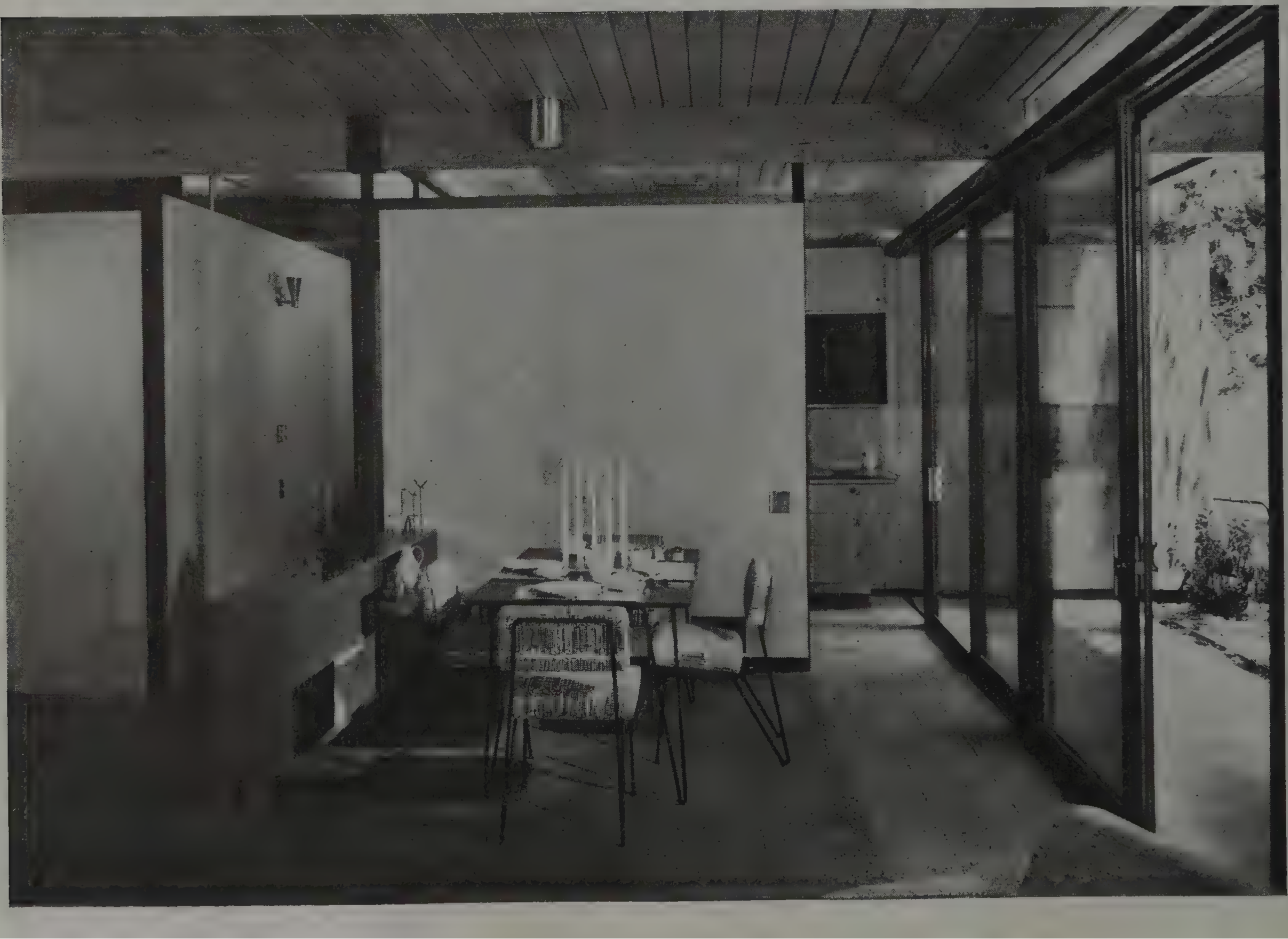
Opposite: all easterly rooms open to a two-level terrace





The airy living room, above, enjoys a canyon view on two sides

Below, a nearly square panel divides kitchen from dining area; entry is at left



The study–bedroom, left, overlooks the entrance and passing traffic through glass-walled corners but is above the sight of people on the road below.

The handsome kitchen, below, is open to living room and terrace. The sliding doors of the cabinets are tempered hardboard enameled in a pleasant pattern of black, white and red panels.

Photos: Julius Shulman

Rooms and space

Of necessity, Ellwood has developed a working philosophy on where money is most worth spending. First is *space*—the most telling luxury of all—and like any thoughtful designer, Ellwood knows that square footage is only half the space. In this house, when you lean back against the fireplace wall, the living-dining room stretches out in front of you for 36′ but the free-standing panel-partitions suggest unlimited expanses beyond. If you look up, you can follow the plank-and-beam ceiling across the partition tops for 48′ within the house and as far as the sky outdoors. To gain outdoor vistas on land wedged between canyon walls, Ellwood decided to raise the house 10′ on stilts. Result: a front view up and down the canyon and a two-level terrace at the rear bounded only by the canyon walls.

Bones and joints

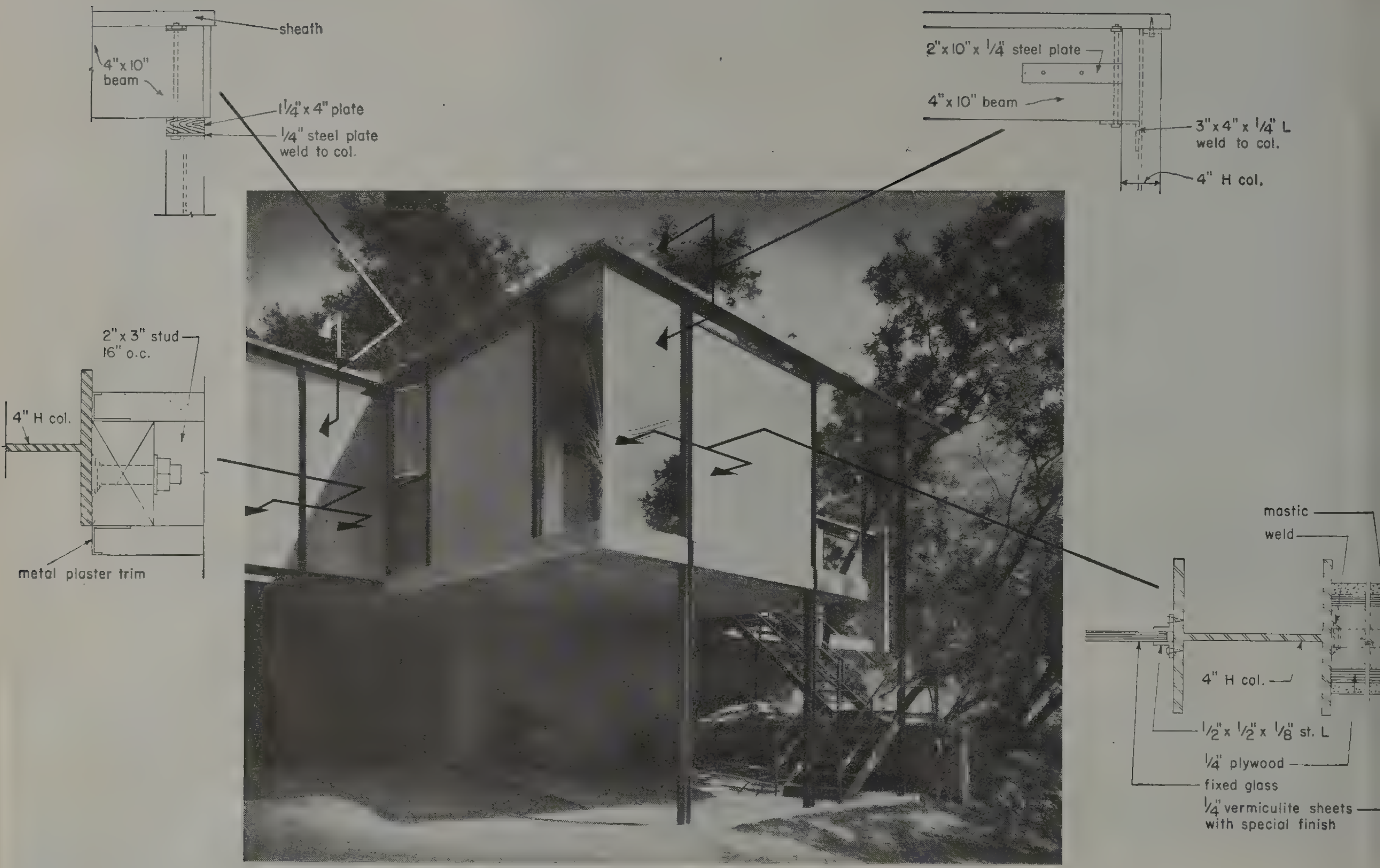
The house is essentially a simple enclosure, but seen at close range—which is the only way you normally look at it because of the restricted site—there is plenty of elegance to delight the eye. What's more, all its elegance is a part of the essential structure of the house.

In general, there is the elegance of precision, neatness, rhythm:

- The precision of walls assembled primarily from manufactured units.
- The neatness of tops of partitions, exterior wall panels, door and window heads all aligned with the underside of beams.
- The rhythm of repeated 8′-square panels tied together at the top by a glass ribbon running between the beam ends.

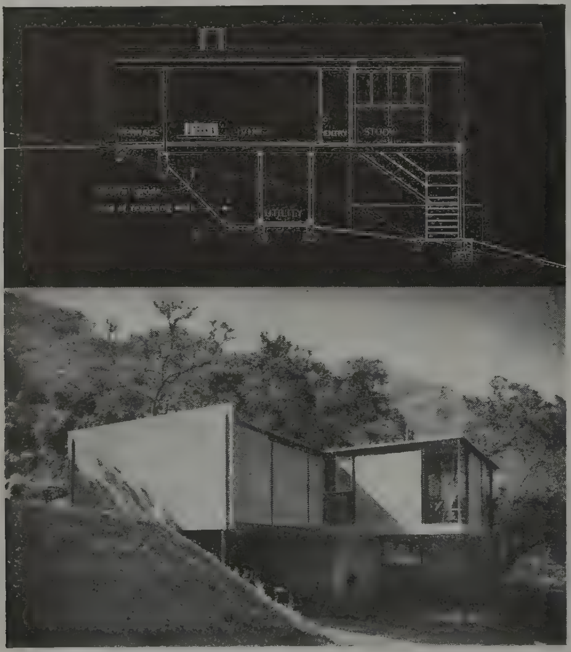
In detail, Ellwood makes deft use of the floating plane, the incised line and the wit of forthright solutions:

- The plane of the roof appears to float free above the walls.
- The plaster of the partitions is a plane floating on the supporting framework.
- The incised verticals of the H-columns are emphasized by reinforcing the fabricator's red lead priming coat.
- The base-shoe of partitions is cut back to gain a shadow line which also hides imperfections of workmanship.
- Where plumbing and heating vents cannot easily be hidden, they are frankly exposed, as are the tin-can cylinders surrounding ceiling lights that can't be recessed in the 4″ plank roof.



For door and window heads throughout the house, Ellwood uses the same milled 2" x 3" profile. To define the separate units which make up the walls, all trim is painted black, sliding-door units the manufacturer's gray, and steel with red oxide.

For an uphill site, below, the reversal of a common hillside plan: terrace on the hill, house on a platform. The plan runs paralled to the natural contours.



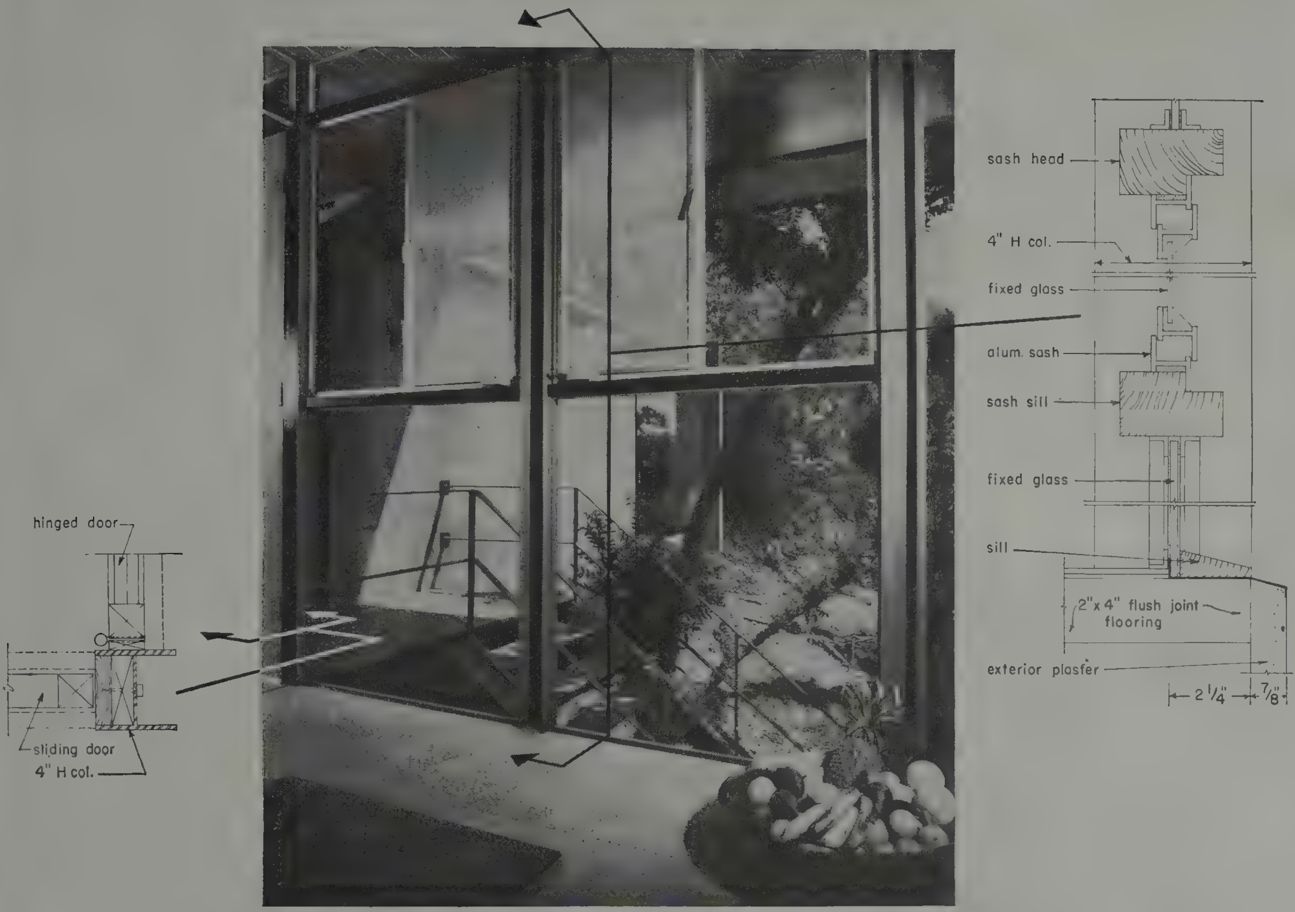
Costs and specifications

Ellwood believes a client is entitled to a firm budget ceiling and—barring natural phenomena or acts of Congress—he is willing to back his contention with a guarantee. His methods are about as casual as a CPA's. Before specifications are written, he secures bids from subcontractors on all major items in several alternate materials and assemblies. With these figures in hand, he reviews the program with his client and writes final specifications. Henry Salzman, a contractor who likes and understands modern methods, usually pops up with the low bid.

On this job, Ellwood would have preferred an all-steel frame but the cost index pointed to wood beams, a saving of about $575, labor and materials considered. Advantages over steel: easier direct nailing of floor and roof decks, column connections without the precise positioning of steel on steel, easier handling because of the lighter weight.

Posts and panels

Ellwood's half-and-half frame is made of 4" steel H columns and 4" x 10" wooden roof and floor beams forming rigid frames spaced 8' apart. The beams run the short way for 16' except at the waist of the building where the study projects like a bay window. In Ellwood's typical beam-to-column connections the beam sits on a 2" x 4" wood plate which runs from column to column the other



Wall panels, above, are bolted or screwed to column flanges. The cement board for the two opaque panels of the study is a Canadian material with a smooth, black-and-white stippled finish.

way. The beam is bolted through twice vertically to the wood plate and a ¼" steel plate, welded to the top of the column. At the floor, the beams frame into the web and 2" x 10" x ¼" straps welded to the column flanges supplement a 3" x 3" x ¼" angle underneath; thus the column can run through to form a stilt.

Panels between the columns are glass, plywood or plastered stud frames. Openings above the wood plate are glass, either fixed or sliding. The two end walls are of conventional stud framing with lath and plaster. The system allows Ellwood to:

- Eliminate all bearings or bracing partitions (lateral forces are taken by the rigid connections).
- Screw or bolt on his exterior wall panels.
- Avoid blocking around doors and windows by dropping beams to door height.
- Use stock sash and sheet materials.

Ellwood & Johansen

Many will compare this system with the "housebuilding kit" of rough and milled lumber developed by eastern architect John MacLane Johansen (H&H, June '52). Ellwood emphasizes the independence and flexibility of partitioning. Johansen is a purist who carefully articulates corners and is consistent in the use of his system. Ellwood on the other hand keeps his columns away from corners entirely and if the system gets in the way of the design and living qualities he is after, he interpolates freely. But about costs they both are single-minded—they have discovered how to make $20,000 to $30,000 stretch way beyond its normal limitations.

A terrace for the master bedroom and bath, above, is screened off by extending the bedroom wall. Since the roof affords no space for recessed fixtures, lighting is by wall pin-ups, ceiling-attached metal cylinders and troughs in cabinets.

Elegance at $9.10 a sq. ft.*

LOCATION: Los Angeles, Calif.
CRAIG ELLWOOD, designer
ECKBO, ROYSTON & WILLIAMS, landscape architects
HENRY SALZMAN, general contractor
MACKINTOSH & MACKINTOSH, consulting engineers

These two houses, identical rental units built for the owner of an adjoining hotel, were a rigorous test for designer Craig Ellwood's specialty—turning out "exclusives" on bargain-basement budgets. The job had one striking advantage: 180° of Pacific panorama, plus one expensive liability: filled ground requiring floating foundations. However, the increased cost of excavation and concrete work ($980 per unit) was handsomely offset by the relatively low cost of the two lots ($5,000 each in an area where lots sell up to $35,000). For the rest, it was a matter of making $10 a sq. ft. look like $500 a month. With the cooperation of contractor Salzman, Ellwood succeeded so well that the owner is planning to build 14 more units nearby.

This is what has persuaded the tenants to part with the stiff $500 rental month after month for the last two years:

- The privacy of living in a real house but under the convenient auspices of a residential hotel
- The view—and it's with you nearly anywhere you choose to sit
- A wide-open plan that seems yards larger than its 1,340 sq. ft. It *is* larger, for each room has nearly half again as much space on the terrace with sliding glass walls to make it accessible
- A sleek design of broad, unbroken planes that make such a good background for the view and bright linear furniture that you never notice its humdrum brick, plus stud-and-plasterboard walls
- Interiors that strike a good mean between Hollywood plush and modern severity
- Amenities you rarely find in rented houses such as air conditioning, indirect lighting, covered entrance walks, a fireplace and seven closets.

Photos: D. J. Higgins

Kitchen may be wide open or discreetly closed to dining area, above

COST BREAKDOWN

Concrete, excavation, extra for floating foundations	$4,760
Masonry	785
Lumber and insulation	2,500
Carpentry	2,000
Plumbing, fixtures, sewers	2,145
Exterior plastering, interior plasterboard, wallboard	2,920
Cabinets, millwork, doors, trim counters	2,850
Glazing	890
Sheet metal	400
Heating and air-conditioning units	1,340
Rough and finished hardware	875
Roofing	380
Electrical including bath heaters, fans	1,085
Sliding-door units, sash	2,655
Ceramic and asphalt tile	185
Painting	1,450
	27,220
Contractor's overhead, insurance, taxes	3,000
Design fee (10% first unit, 2% of second)	1,813
	$30,220

Outdoor emphasis plus an 8' terrace make the 15'-6" x 23' living area look larger

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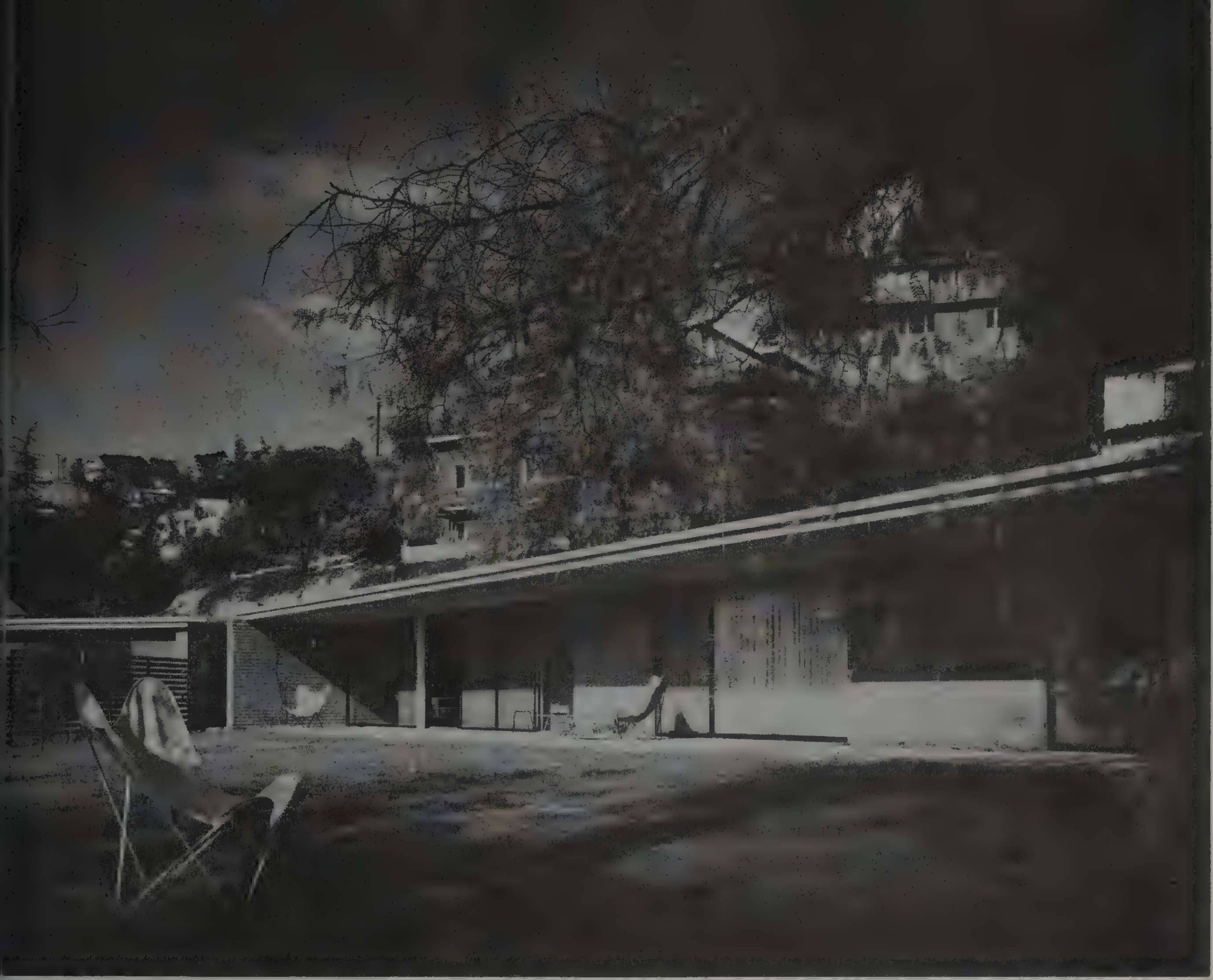
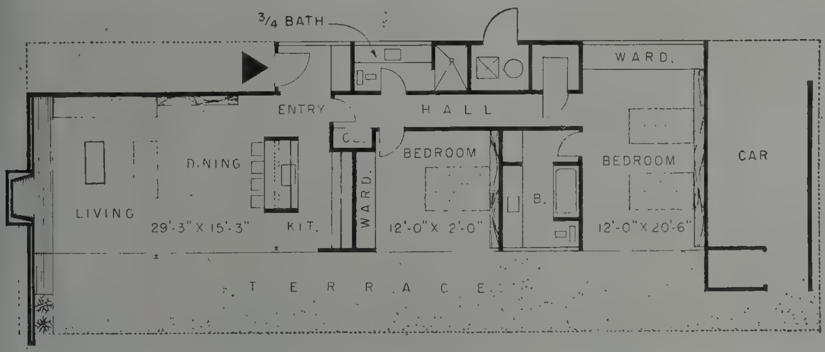
* *Figured at the customary 50% of square footage for covered entrance, carport, terrace excluding land, landscaping, design fees.*

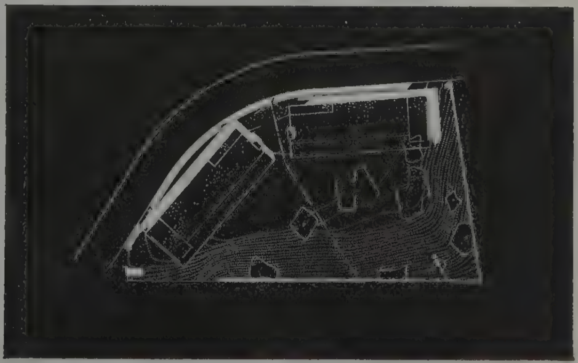


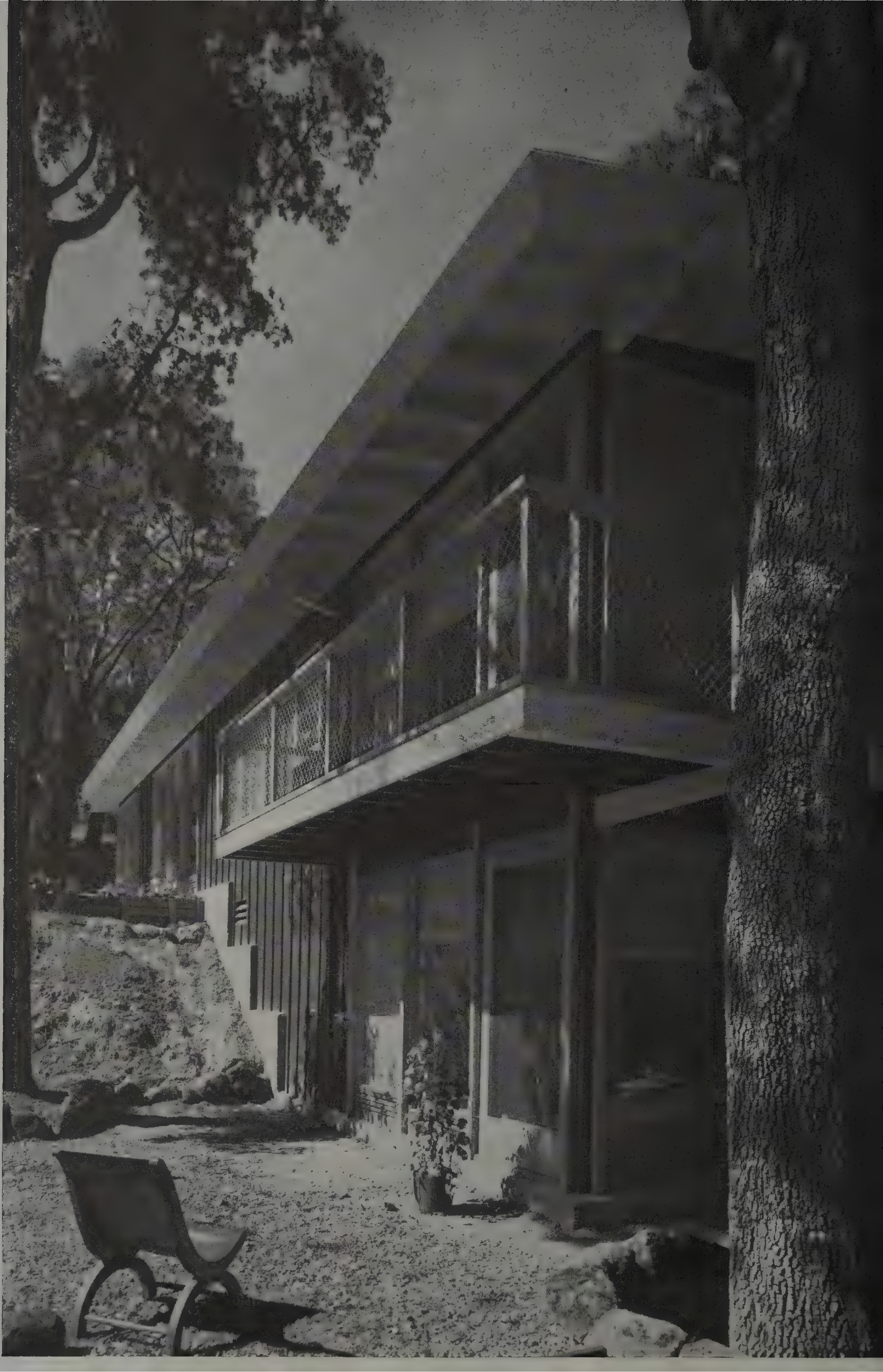
Photos: *Donald J. Higgins*

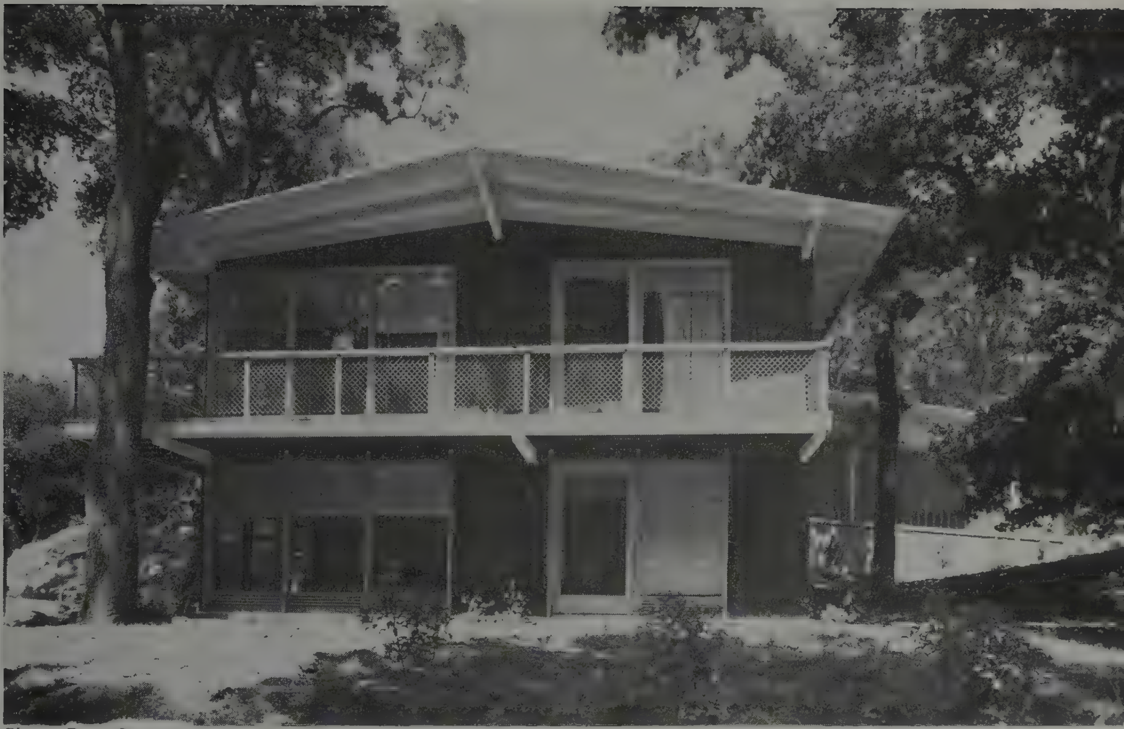
On the terrace side, houses have 180° view down to the water



Plan of adjoining houses is reversed, bedrooms are farthest apart





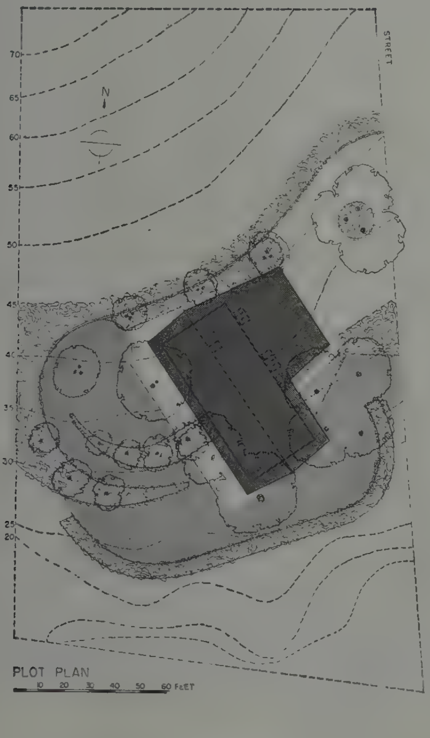


Photos: Roger Sturtevant

South end of house is two stories high, has two bedrooms and balcony upstairs, bedroom and playroom downstairs with direct access to garden. Picture opposite shows play yard and exposed stepped-down foundation walls at side of house.

LOCATION: Marin County, Calif.
JOSEPH ESHERICK, architect
DOUGLAS BAYLIS, landscape architect
TOM M. JONES, general contractor

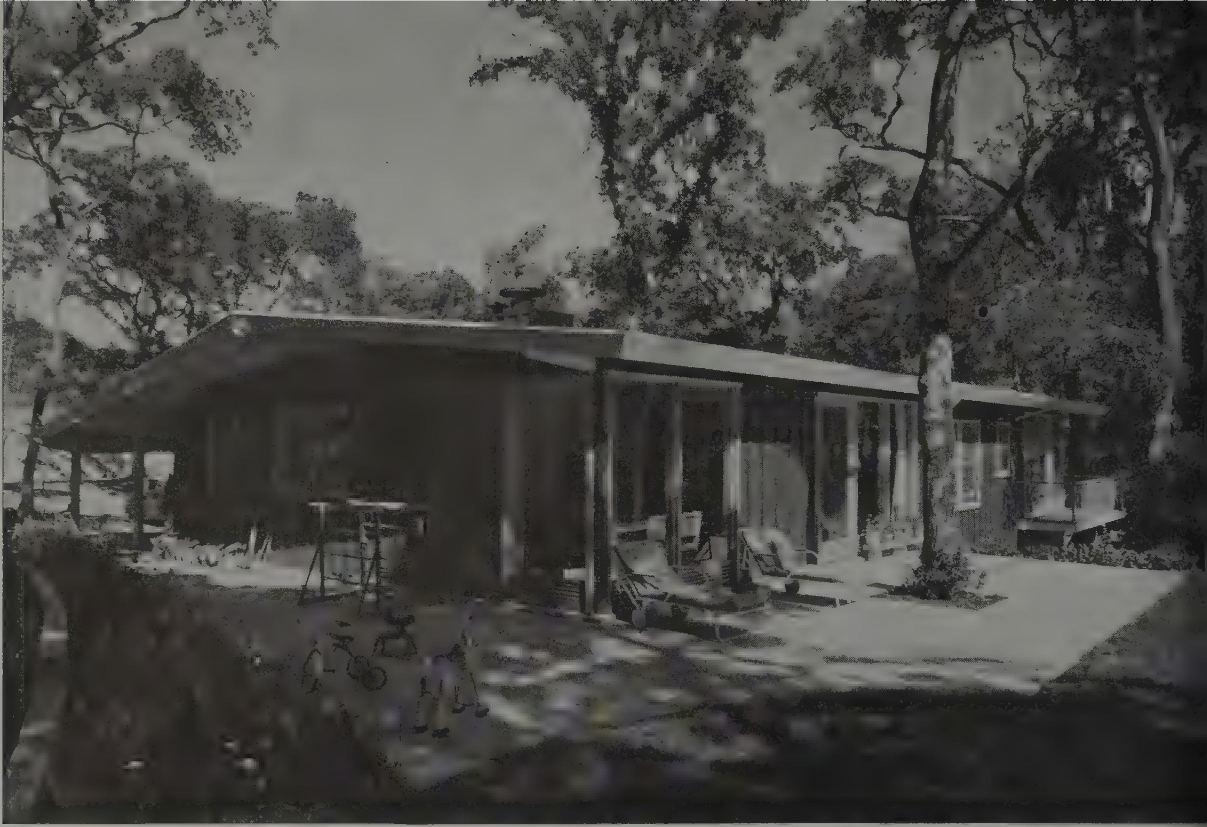
Hillside house



This is a simple, straightforward house that solves a pretty common problem—the problem of the hillside house with access generally from above—in a simple and straightforward way. It is a house with a good deal of unaffected charm, too, and this absence of affectation makes you wonder why there are not more houses like it.

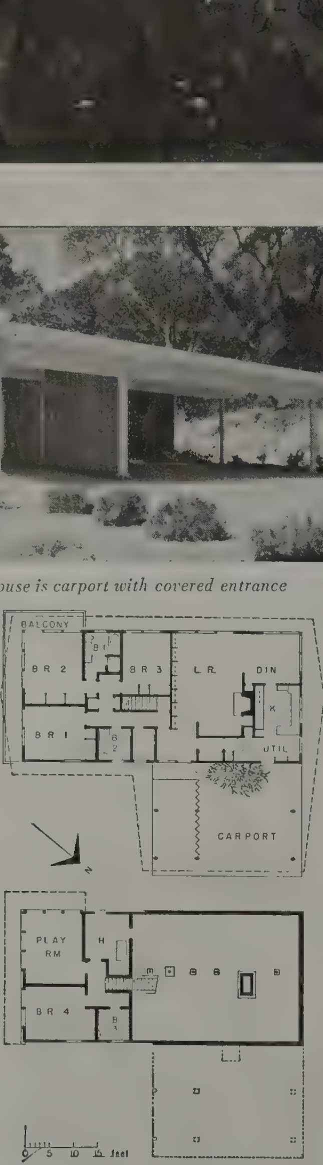
The reason is that there are not very many architects as good as Joseph Esherick (*see* H&H, Jan. '52). His work has a kind of reasonableness and simplicity that carries a good deal of conviction: for example, when he has a problem of designing a five bedroom house for some $26,500 (as he did here), his primary concern is likely to be with just how much space he can carve out of his hillside lot and stay within this limited budget.

There are two main ways of solving this kind of sloping-lot problem: Method No. 1 might be called the "Harvard method"—it would consist of running a long, rectangular box *parallel* to the slope, resting it on a recessed masonry base (containing utilities, storage and playroom), entering the house on the back of the second floor (which would be the basic living floor) and, possibly, stepping down from that floor to the downhill garden by means of some suspended, cantilevered, or otherwise articulated stair.



Living–dining area in northwest corner of plan extends outward onto a terrace

At northeast corner of house is carport with covered entrance



Method No. 2 might be called the "California method"—and this is the one Esherick used here. It consists of running the rectangular plan *downhill* (which makes more sense especially on narrow lots than running it parallel to the slope) and making quite a feature of this downhill "motion" of the house. (Esherick does it with the regular steps of his foundation walls which he has exposed along both sides of the house.) The advantage of this downhill plan over the "Harvard method" is that it requires somewhat less excavation and a good deal less grading (levels of the lot can be allowed to change gradually, from the upstairs entrance level to the downstairs play-yard level at the far end of the house). The disadvantage is that it tends to cut up the lot—but this can be used skillfully in such a way as to create a series of small, useful outdoor terraces of the kind that has been created here.

Esherick's manner of detailing his houses has been discussed in an earlier issue of H&H. It is generally forceful enough to give strength and coherence to even the most casually arranged plan. In this house, he has used the roof lid with pointed, overhanging gable ends to tie his house together. The post-and-beam structure that holds up the roof and the balcony is used as a dominant design feature and repeated, with variations, in the uphill carport.

Incidentally, the beam ends project beyond the pointed gable ends and are pointed themselves. This is not a new idea, but anyone interested in finding out how important nice detailing is to nice over-all design might just try to sketch this house with straight, cut-off gable ends and beams—and see how much the design of the whole begins to lose! This is the kind of small, but all-important touch that distinguishes the good architect-designed house from the vast majority of dwellings built in the US every year.

Living–dining area is shown at right. Paved terrace outside it is seen in picture opposite.

Below: Master bedroom with balcony beyond. Note the sensation of "tree-top-living" you get in this part of house, in contrast with one-story close-to-garden living effect achieved elsewhere

"Operation Trade Secrets" in full swing again.

More than 20 meetings are planned for the new series to be held in all parts of the US

LOCATION: Biloxi. Miss.
SPONSOR: National Association of Home Builders
CHAIRMAN: Martin Bartling, Knoxville, Tenn.

The best idea developed by NAHB in 1951—"Operation Trade Secrets"—has swung into its second year.

Sparked by a fast-moving committee headed by Martin Bartling, with Ned Cole, Andy Place and Dave Slipher as co-chairmen, meetings have already been held in Dallas, Ft. Worth, and Biloxi. Other meetings are planned for Houston, New Orleans, Phoenix, Madison, Denver, Salt Lake City and Minneapolis-St. Paul. A summary meeting is planned for the Chicago convention in January.

Under the guidance of the Trade Secrets Committee of NAHB, the country has been divided into seven regions, meetings planned for each. As each builder gets new ideas from a meeting, he is expected to hold his own meeting and invite outstanding builders from out of town.

Typical of the 1952 series was the two-day meeting at Biloxi beginning July 17. Planned by Floyd Kimbrough and arranged by Frank Steudlein, the meeting discussed the issues reported on the following pages.

Builders attending the Biloxi meeting

Martin Bartling, *Knoxville, Tenn.*
Richard Hail Brown, *Birmingham, Ala.*
George S. Goodyear, *Charlotte, N. C.*
Floyd Kimbrough, *Jackson, Miss.*
Floyd Kimbrough, Jr., *Jackson, Miss.*
Fred C. Loucks, *New Orleans, La.*
Frank Robertson, *San Antonio, Tex.*
Frank J. Zuzak, *Shreveport, La.*
Chester Camp, *Memphis, Tenn.*
Charles K. Chandler, *Memphis, Tenn.*
Manny Delugach, *Memphis, Tenn.*
J. M. Powell, *Baton Rouge, La.*
Frank Steudlein, *NAHB, Memphis, Tenn.*
Kemmons Wilson, *Memphis, Tenn.*

Left to right facing camera:
Frank Zuzak, Martin Bartling, Kemmons Wilson, Charles Chandler.

Floyd Kimbrough and architect-designed house

Use an architect!

Floyd Kimbrough: "*We expect to handle the sale of many of our houses not just once but several times. We can make resales faster if the houses are well designed. $50 for an architect is the best money we can invest.*"

From a cross-country trip, Kimbrough was convinced that his $11,000 house should have 1,200 sq. ft. and 70′ lots. "*An extra 100 sq. ft. of house costs less than $5 per sq. ft.*"

A building-supply business?

Kemmons Wilson: "*A builder needs to buy at least $1 million worth of materials per year to justify owning his own building-supply business.*" Wilson does $100,000 a month in his supply subsidiary at a cost of about 8%, carries inventory of around $125,000 and accounts receivable of $100,000, so his capital invested is $225,000. "*It is not profitable to buy every small item we need; it is cheaper to buy many items from local sources.*"

Richard Brown: "*We have our own building-supply business and $10,000 invested in odds and ends we have no use for.*"

What about discounts?

Martin Bartling: "*Some careful studies we made showed that it often paid to buy items retail as they were needed instead of getting big discounts by buying wholesale but having storage problems.*"

Charles Chandler: "*When I went to a cement-mixing firm I told them I did not want a discount. I wanted deliveries at the time I wanted them, not late in the afternoon, for example, when I'd have to pay overtime. If they had given me a 10% discount they would have tried to save that money somewhere and I would not have gotten the same service on my deliveries.*"

Wilson: "*The money made in the building business is the little extras picked up all along the line. You can make a good living on 2% if the volume is large enough.*"

Buy land cautiously

Chandler: He cited an example of a builder who rushed into a land purchase without giving it proper study, only to find that he would have to pay $82,000 to develop 39 lots because of drainage problems.

"*I consider $2,500 a cheap option to pay on 100 acres for 30 days. This gives a chance to get engineers in to study the land. Often it provides a cooling-off period that permits a builder to back out if he wants to.*"

What sites to buy?

In addition to the esthetic values of sloping sites, Chandler added the mundane advantages of sewers being cheaper to build than on absolutely flat land and the fact that the slope would minimize having to take extensive drainage precautions.

Chandler: "*Watch out for filled-in land. One builder I know was forced to spend $150 more per house to put in spread footings after the FHA discovered he was building on filled land.*

"*I recommend scattered trees as the best type of growth. Too few trees are a sales handicap, but a heavy growth may cost the builder $100 a house to cut trees and dig up stumps.*" *

As one of the South's leading land developers (with some 5,000 Memphis lots behind him), Chandler recommended that 20% of the land should be provided for streets, 3% for commercial development, 2½% for play areas and the balance for houses, a division that would permit 430 lots 60′ x 125′ in a 100-acre subdivision.

Chandler: "*Lot costs, including utilities, should not be over 15% of the selling price.*"

How to sell VA mortgages

(or any other kind)

George Goodyear: "*Get your whole package together properly when you are trying to sell VA loans. By 'whole package' I mean the complete story of the proposed developments. In addition to plot plans, drawings, specifications and other usual material, we prepare long strips of colored renderings of the way our houses will look on each street. We do this for every street in the project and when the drawings are blueprinted, our draftsmen fill in the proper colors with crayon.*

"*We use these strip drawings over and over. We show them to FHA, VA, to buyers of our mortgages and to our customers. Though we build only one floor plan throughout a project, the renderings help show how many variations we get by changing roof lines, door and window arrangements, materials and color.*"

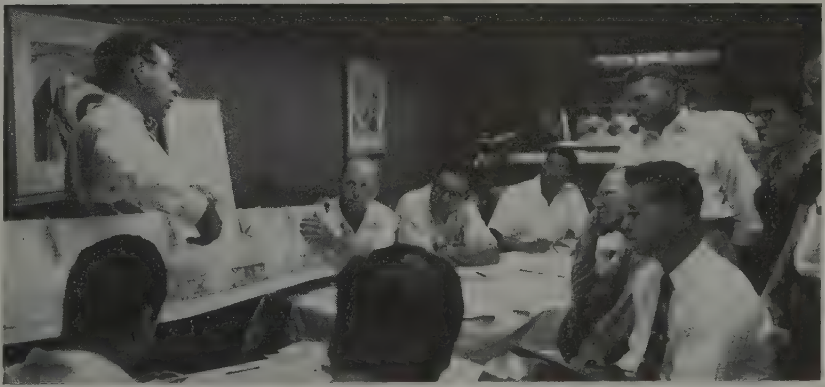
Proof of builder-mortgageman Goodyear's pudding is the fact that he is currently servicing over $22 million in North and South Carolina mortgages, though his own building is limited to 125 houses a year. And in his own words, "*We've got lenders standing in line for our VA loans at 98.*"

Items that increase values

Wilson: "*In our $20,000 houses we supplied wall-to-wall carpeting on our slabs for only 50¢ per sq. ft. more than hardwood floors would have cost, and the carpeting was one of our biggest sales assets.*"

Goodyear: "*Put in items that will build up your evaluation. An attic fan that costs you $65 will raise your evaluation $135. A kitchen fan costing $25 will increase value by $50. We used to provide storage space outside the house but now we put it in the house (with only an outside door) and we are getting almost full credit for this unfinished space.*"

George Goodyear with strip drawings



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* *While it may cost $100 to take out superfluous trees, $100, or many times $100, will not replace mature trees that your bulldozer has rooted out. Ed.*

Flexible houses

The problem was how to keep a house flexible enough to fit the varying needs of the American family, through its initial stage as a young couple, progressing through the child-raising stage (which may consist of one child or the proverbial "there was an old lady who lived in a shoe" condition), then back to the couple again, now 20 years older. Builders have tried to allow for this with expansion attics and varying plans for augmenting the livable space in their houses. One neglected facet of this thinking has been what to do with this space after the need disappears. In many communities oversized, limited-use houses are sore spots, tending to degenerate into rooming houses or substandard slums.

The builders attending the Biloxi Trade Secrets meeting were treated to a preview of an exciting experimental attempt to find a solution to this problem by San Antonio's Frank Robertson. In a brief description of the five pilot models that he already has under construction, builder Robertson kept many details under wraps but brought out these points:

Frank Robertson (left of plans) describes his flexible houses to builders.

1. **The house will have 1,250 sq. ft. and will sell for approximately $16,000.**
2. **Bathroom and kitchen will have the only interior-fixed walls.**
3. **Bedrooms can be varied in number from one to four.**

Basis for Robertson's thinking is the fact that needs of a young couple are very similar to those of an old couple, but that in between these two states, requirements are subject to a wide variation. He is trying to produce a home that will give maximum coverage to the needs of the family at any stage. Like a balloon which can be inflated or deflated without altering how much balloon there is, Robertson's new houses will be "distributed differently," for different needs.

Though bedroom arrangements can be set up for a family with any number of children, the house can also be made suitable for the family during later years when all they want is one or two bedrooms, plus an extra-large living room or recreational and entertainment space. Even such special cases as that of a widow who wants to rent out a small efficiency apartment can be accommodated by Robertson's "Flexabilt" house. Two bathrooms will be included in the original planning which will permit two-family living or a separate apartment. The first five experimental models will be ready in late autumn, complete with cost data.

Though builder Robertson is bringing new thinking to the problem of flexibility in houses, he is not working from the ivory tower of pure theory. His San Antonio firm now builds from 150 to 300 houses a year, ranging in price from $8,500 to $20,000.

How to sell a house

In an open discussion of "musts" for builders led by Chester Camp and W. D. Jemison, Jr., of Memphis, Dick Brown of Birmingham and Frank Zuzak of Shreveport, the 17 homebuilders took up the vitally important nonbuilding points of public relations, merchandising, advertising and publicity. Out of the welter of ideas came a series of points that all added up to:

1. Land is the basis of all building; therefore the best policy is to pay more if necessary and get the most desirable land.

2. Subdivision layout (land planning) that includes culs-de-sacs, boulevards and circles, and staggered house siting has a great appeal.

3. Landscaping helps to sell any house. If trees are planted back from the sidewalk, the house, not the street, gets the benefit of the shade. Trees planted next to the curb are wasted.

4. Good design is of the greatest importance. Said Zuzak: "Giving a house a pleasant facade is like adding fresh makeup to a woman's face."

5. Advertise regularly in all proven media.

6. Train your sales staff in advance so that any salesman can answer any question concerning the house with enthusiasm and knowledge.

7. Approval by a design-recognizing organization is of great help in sales and publicity.

8. Furnish your model house as a sales stimulant.

9. Keep your model house exactly like the houses that will be sold to prevent confusion.

10. Give a printed warranty.

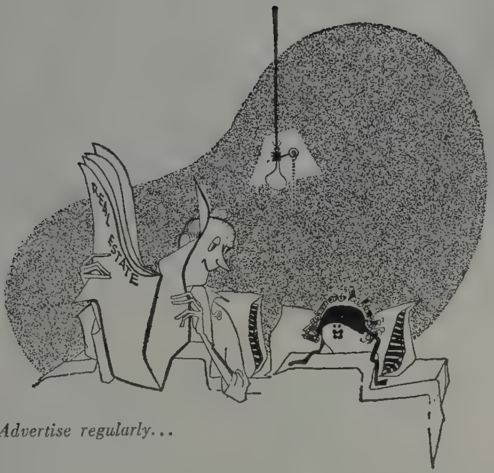
11. First impressions are critical, so have an attractive arrangement just inside the front door (a welcoming vestibule, a planting box, etc.).

12. Include pamphlets telling how to maintain a house, with names and phone numbers of subcontractors who should be called.

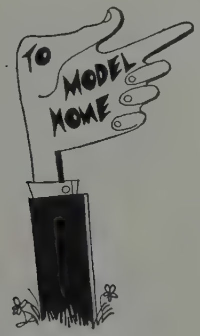
13. Include air conditioning in any house where the need demands it, and the price will warrant it.

14. Be prepared to accept a sales cost of from one to four per cent of the sales price.

15. Handle complaints speedily and honestly. Let the buyers know what is, and what is not, covered by any guarantee. One builder called complaints the Achilles' heel of the business.



Advertise regularly...



Furnish a model home...

...to make sales

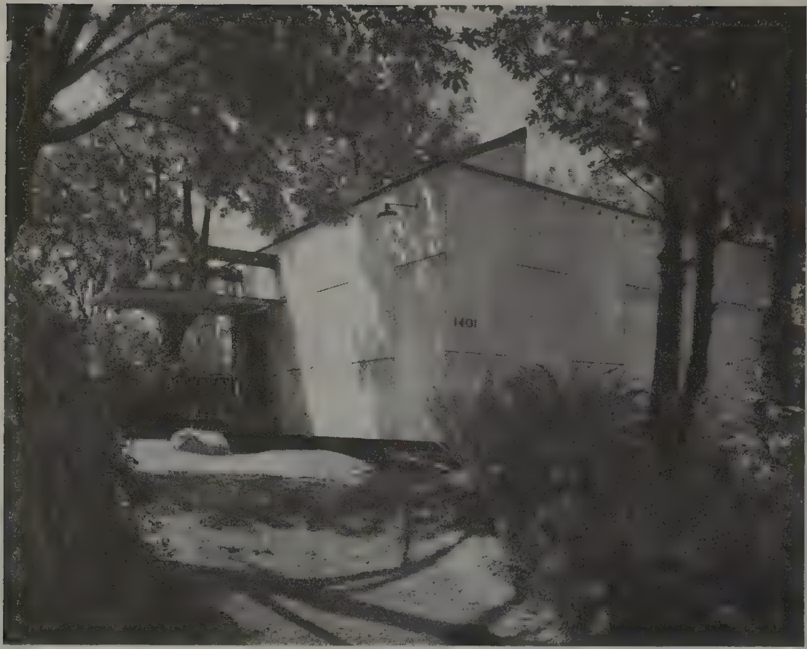
700 SQ. FT. HOUSE

shows imaginative handling

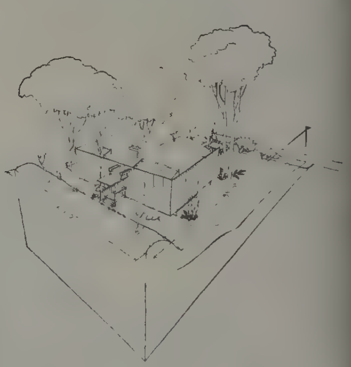
of a difficult site,

of commonplace industrial materials,

and of space and light



LOCATION: Seattle, Wash.
VICTOR STEINBRUECK, architect



Corner lot 60′ x 85′ drops off by almost 20′, is heavily wooded. House is angled slightly to save trees.

This is a very strange house with a good many interesting points—so many interesting points that the Washington State AIA picked it out for an Honor Award for excellence in design.

It is a strange house largely because it was built on such a strange site. In the pictures it looks as if it were hidden way out in the woods—raising a legitimate question of why it should be as windowless on three of its sides as a downtown row house. In actual fact, however, it was built on a tiny (60′ x 85′) corner lot less than a mile from downtown Seattle, in an old neighborhood that is going downhill fast. That explains why the house is considered a real asset to its street rather than an affront to its neighbors.

The 700 sq. ft. house that architect Victor Steinbrueck has built himself for $10,000 is much more than a special solution to a very special site problem. It is also an interesting solution to two increasingly common problems:

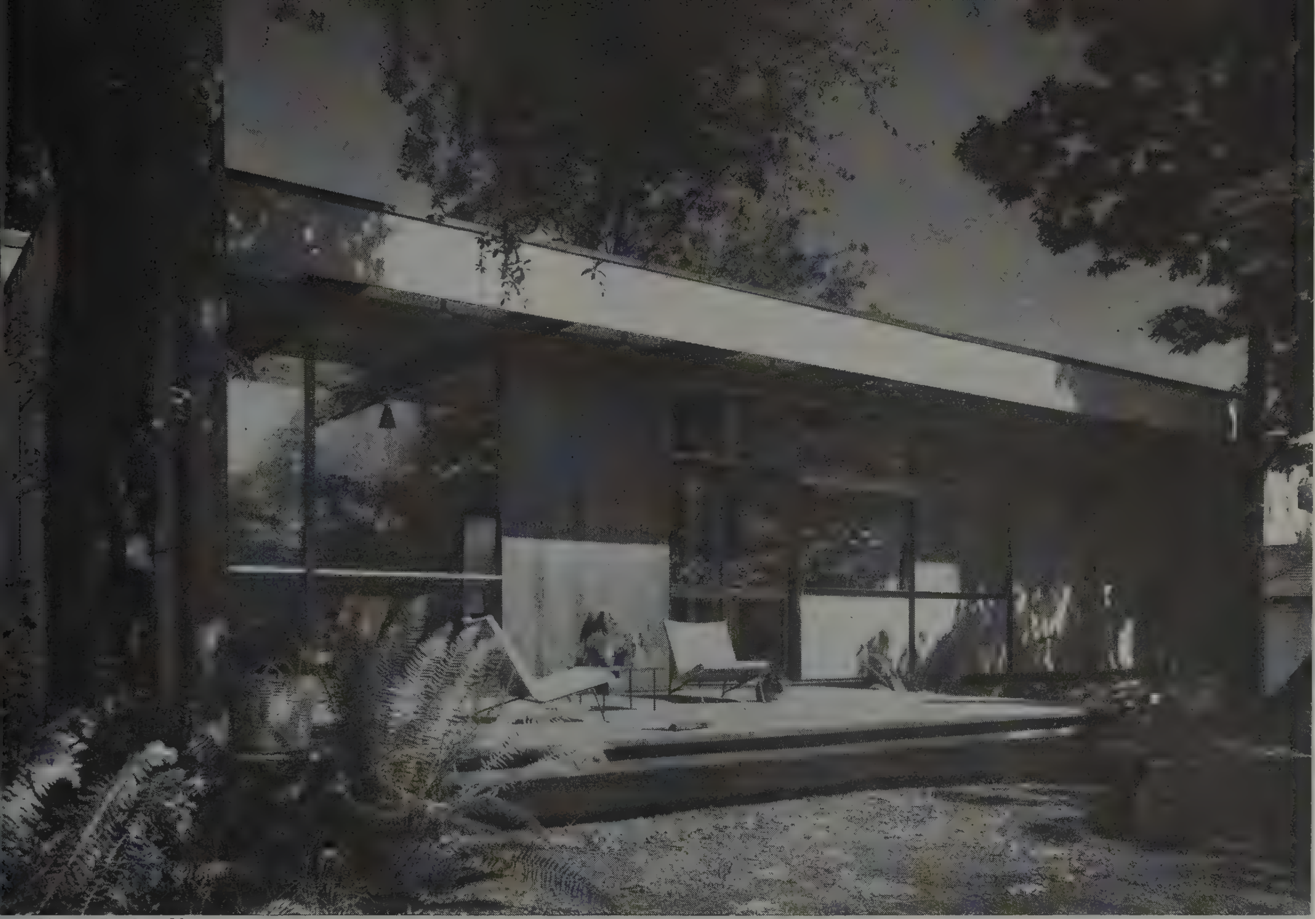
How to use industrial materials in residential building—which requires, among other things, an understanding that materials have a character of their own and don't need to be "typed" by previous associations, e.g. cement asbestos, aluminum foil or corrugated wireglass don't have to spell "factory"—they can spell "home" just as well. And

How to use space and light—which is never so important as when there is very little actual space and when light comes from only one side of the house. Here space (stressed by a 10′ ceiling) and light (obtained in part through skylights that backlight the rooms) combine to make a small house seem big and bright, and make *all* of its volume light and cheerful *all* of the time.

Steinbrueck's solutions to these two problems are discussed in detail *below*. First, however, let's take a close look at what his site and neighborhood did to make the overall concept of his house so unusual.

Privacy on a difficult site. Architect Steinbrueck's site is not only a 60′ lot (a hideous invention under any circumstances), it is also a steeply sloping lot, a heavily wooded lot, a corner lot and, finally, a lot in a rather dingy neighborhood of drab, old homes, warehouses and gas stations. In such a setting he may well be excused for doing what might seem impolite in more appealing company: turning his back upon street and neighbors, building a 12′ high, cement asbestos wall around three sides of his house and opening up only the fourth to a small garden.

The result is a shadow-box of a house, 16′ deep, 42′ wide, 10′ high on the inside. This is a frank and direct way of saying "no" quietly to any intruders—it is as if Steinbrueck had gathered up the tradi-



Photos: Dearborn-Massar

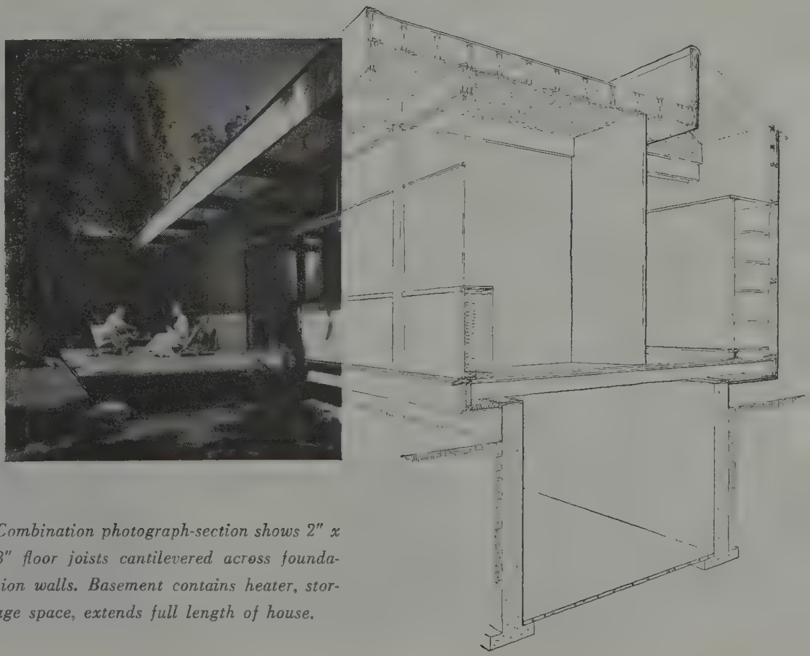
Garden facade is almost all glass, faces west. Porch at left is cantilevered like rest of house. This cantilever all around the periphery of the building gives it lightness and grace, crisply defines the building's silhouette.

tional board fence and pulled it tightly around his house. Actually, the neighbors think the house looks fine, even though they only see its somewhat forbidding blank walls, and even those are only barely visible over the top of an 8′ high bank along the rear lot line, and through the thick screen of trees.

Some may feel that this uncompromising shadow-box solution should not be emulated by anyone else building on the more exposed 60′ lot; but so long as such substandard lots exist, solutions such as this one are likely to be found even where neighbors are close and visible. On such a lot, this kind of house would be similar to a one-family slice taken out of a strip of row houses—and the case for the row house in narrow-lot developments has always been strong.

Steinbrueck's shadow-box is entered from the rear, across a little covered platform. This platform and its canopy are elements of small-scale relief in an otherwise brutally plain exterior.

To give that exterior its crisp outline, the architect did exactly what a sculptor does: he placed his box on a pedestal, raised it off the ground to get a sharp shadow line under his floor, a parallel floor and roof edge, and an unmistakable definition to the over-all silhouette. (H&H discussed this point at length in last month's issue, in our *Advice to the FHA Appraiser* series.) To raise his box off the ground, Steinbrueck recessed his excavated basement (between foundation walls) by 2′ along the



Combination photograph-section shows 2″ x 8″ floor joists cantilevered across foundation walls. Basement contains heater, storage space, extends full length of house.

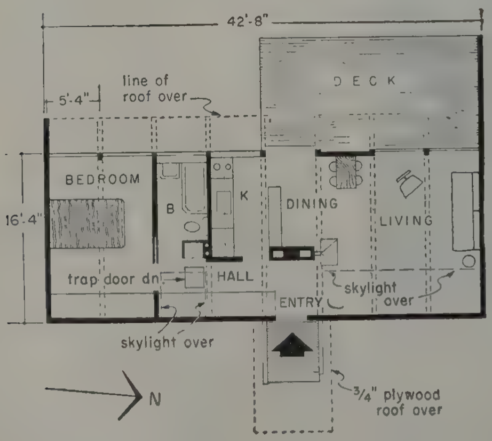
rear side, and by 1′ along the long garden side. Next, he cantilevered the floor joists out beyond the walls. In addition to giving the box a sense of floating on air (and so increasing its importance), this simple device also reduced the clear span of floor joists, enabled him to use 2″ x 8″s (rather than 2″ x 10″s) for all his floor spans. Incidentally, a porch with screen wall on the west side was cantilevered out in a similar fashion, as was the entrance platform to the east. Thus the notion of the "floating box" was carried through without compromise.

The plan inside the shadow-box is in-line. Rational and compact, its only questionable feature is the location of the fireplace (which seems to discourage furniture grouping in that area).

Materials out of a factory

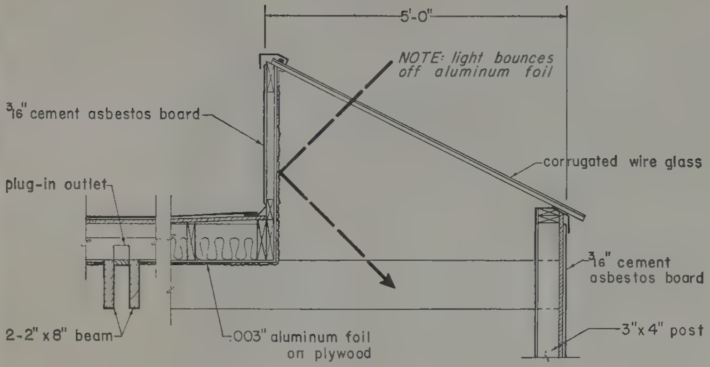
On the exterior of his plain-faced shadow-box, Steinbrueck used 3/16″ cement asbestos boards with copper-flashed, horizontal and vertical joints. The material harmonizes with adjoining gray clapboard houses, reveals no traces of its earlier association with industrial structures. The joints between the 1′ x 8′ panels are staggered to create a more interesting pattern and to relieve monotony.

Inside, the architect again found that industrial materials can be made to look interesting and even luxurious. Between dropped, double 2″ x 10″ beams (5′-4″ on centers, and 2-5/8″ apart to frame around his 3″ x 4″ posts), he applied .0030″ aluminum foil to a plywood ceiling. The crinkled, silvery foil contrasts brightly with the Prussian blue stain used on the dropped beams, and it sparkles by night like a Christmas tree when lamps and candles are reflected in its surface. Other, adjoining colors—cedar siding, cadmium yellow and orange in cabinets and trim—are also reflected in its bright texture. All in all, this is quite a luxurious effect to get in a minimum house—and the cost of the foil (crinkled and stapled in place) was only 10¢ per sq. ft.



View of east wall of living room shows effectiveness of skylights

Living room with porch beyond. Note crinkled aluminum-foil ceiling


5'-0"
NOTE: light bounces off aluminum foil
3/16" cement asbestos board
corrugated wire glass
plug-in outlet
3/16" cement asbestos board
2-2"x8" beam
.003" aluminum foil on plywood
3"x4" post

Skylights are angled to make light bounce off aluminum-foil surface and back onto east wall. Picture below shows night lighting, reflections in aluminum-foil ceiling.

Airy space, brightly lit

There are many advantages to the AIA-NAHB recommended ceiling height of 8′-0⅜″, but a sense of airy spaciousness is not always one of them. Steinbrueck's living–dining area is only about 21′ x 16′, and he wanted to make it seem a good deal bigger. To create that illusion, he raised his roof and built a row of skylights to make sure that what space he has is always bright.

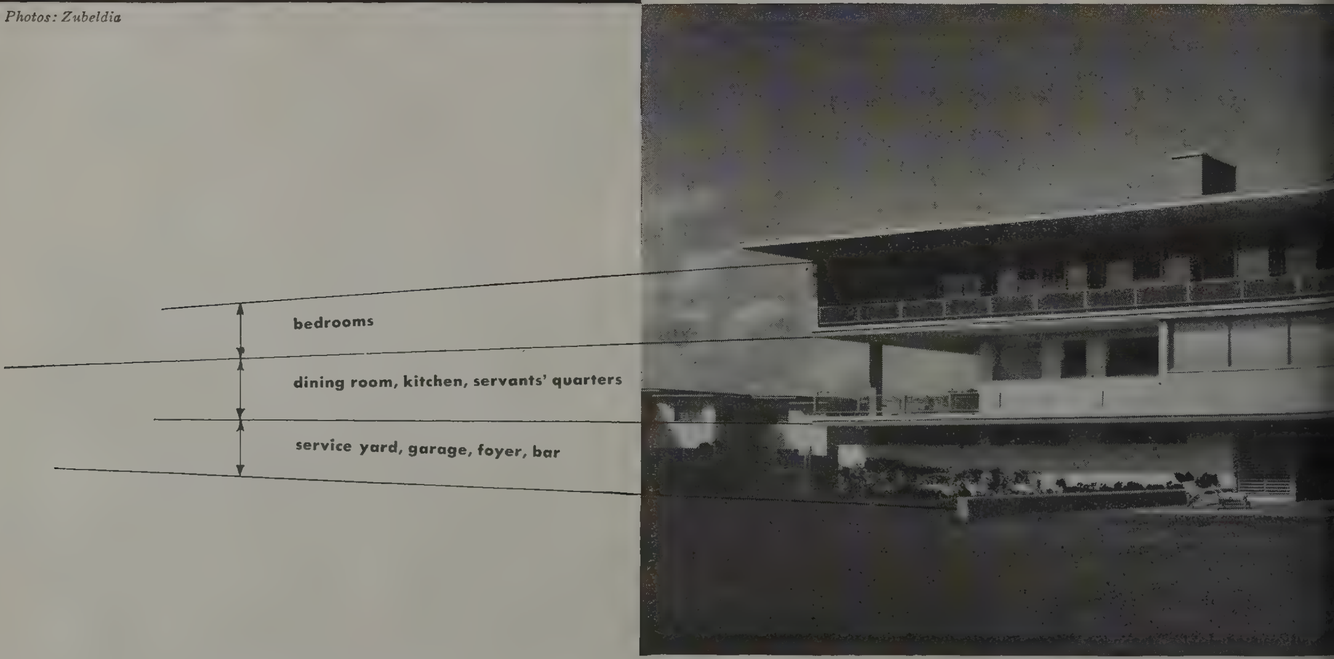
The 10′ ceiling height (to the underside of the aluminum-foil surface) not only produced a sense of spaciousness; it also simplified some structural problems. For example, this ceiling height produces an exterior wall just about 12′ high (from gravel stop down to bottom edge of cantilever). This means that the 4′ x 8′ asbestos cement sheets could be used in full and half standard sizes throughout, and fascia boards could be eliminated entirely on three sides of the house.

To get light next to his windowless walls, Steinbrueck built a continuous slot of corrugated wire-glass skylights over a large portion of the east end of his house. The light coming in through these skylights balances the bright natural light from the glass walls on the opposite side and is, according to the architect, "very pleasant and cheerful on some of Seattle's gray days. There is probably quite a heat loss through these lights in the winter," he continues, "but the light and cheeriness seem to compensate for this." Some may ask why he did not simply run a clerestory slot under his 10′ ceiling along the rear of the house; it would have given him as much privacy as he has now, and might have cost less. One reason, however, is that the skylights are designed to reduce direct sky glare *(see section)*.

The Steinbrueck house makes no attempt to be tricky. Its module in the east-west direction is determined by the 5′-4″ column spacing: two such bays make up the bedroom, one the bath, one the kitchen, and four make up the living–dining area. This is an orderly and sensible structure, because a small house had better be orderly, sensible and simple so as not to appear even smaller than it is.

Night view shows entrance side (west) of house, with reflecting pool in foreground. Bridge from dining level to living room is seen directly above pool. Lighting emphasizes theatrical qualities of composition.

Photos: Zubeldia


bedrooms
dining room, kitchen, servants' quarters
service yard, garage, foyer, bar

Caribbean mansion

a fabulous space construction

in the Cuban breezes,

shows that beauty and climate-control functionalism

are not mutually exclusive

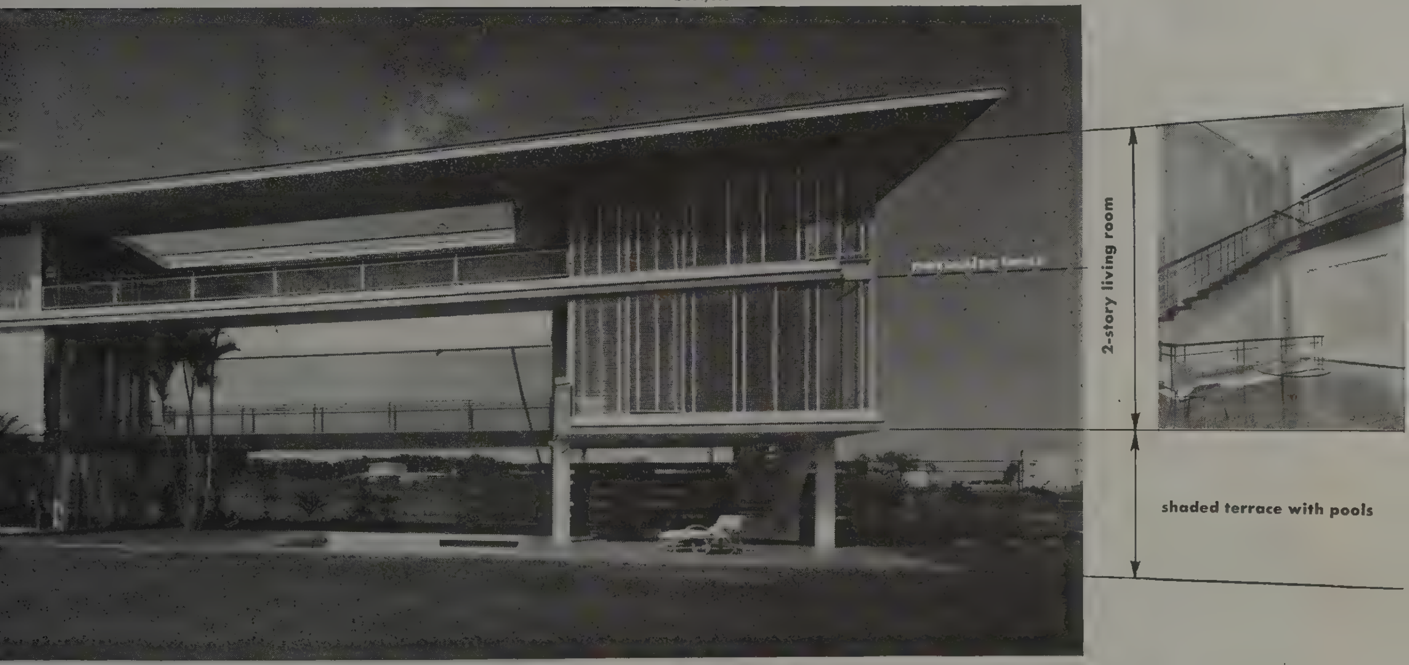
LOCATION: Havana, Cuba
BOSCH & ROMANACH, architects

When Walter Gropius returned from Cuba recently, the house he talked about most enthusiastically was the extraordinary structure shown on these pages. One glance at the photographs will go far to explain why.

But this house is not only a dynamic piece of modern design; not only a photogenic arrangement of planes, forms and spaces; not only an exciting visual experience.

It is also a fine example of how much can be done to make space—the "reality within the glass shell"—a distinct architectural element. It is a fine example of how a complex building can be given architectural unity and order with a few powerful, broad strokes. Finally, it is impressive evidence that "climate-control functionalism" and esthetic purity need not be mutually exclusive approaches to design.

Sevifoto



East facade is fairly open, protected by deep overhangs against sun and driving rains. At south end of house (left) is three-story complex containing services, dining and kitchen areas, bedrooms. At north is two-story living room.

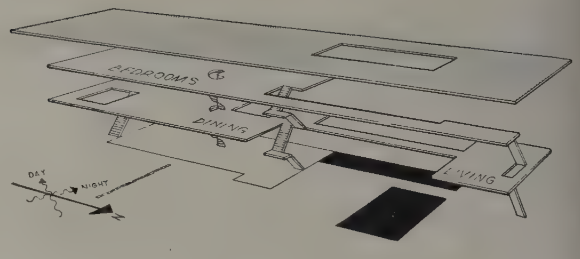
Two-piece house with levels for all. This house for the Noval family outside Havana is really two houses under one roof: the bigger house is three stories high, contains foyer, bar and garage on the first floor, dining room, kitchen and servants' quarters on the second, and bedrooms on the third; the smaller house contains only a two-story living room raised on stilts. These two houses are linked by the common roof, by long bridges on the second and third floors, by a paving pattern and other landscaping on the ground floor.

To make these two houses hang together *internally* (as well as by virtue of their sweeping roof plane) the architects evolved a series of vertical space penetrations that link one level to the next. Thus the entrance foyer has an 8′ x 15′ hole cut into its ceiling to link it visually to the dining area on the second floor; the two-story living room has a mezzanine which becomes the bridge into the third-floor bedroom area; and the open area right in the center of the house is as elaborate and exciting a space construction as any that you might find in the stagehouse of a theater: bridges seem to leap across the open space like catwalks and a 20′ x 40′ opening in the roof above provides them with a view of the sky. Since the bridges are not above one another, that view is never obstructed.

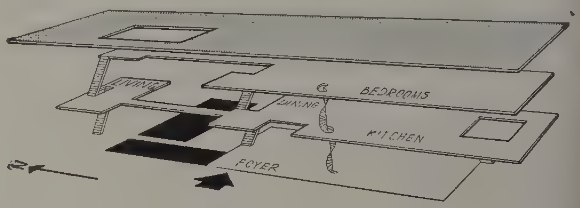
The result is indeed like something out of the theater: for this is truly a dramatic stage set, reminiscent of some of the fabulous constructivist sets built on European and American stages in the 20s and early 30s. Each walk across the length of the house becomes a minor dramatic production, each view reveals a different interplay of planes and surfaces, each approach to the house and under it leads through spaces of different height and character.

Climate control without loss of art. But the love of drama alone does not account for the open spaces, the catwalks, the three-story patio in the center. According to the architects (who are safely removed from the highfalutin' esthetic controversies of New York, Boston and Chicago and may not have been told yet that "functionalism is dead") this fabulous residence makes a great deal of climate control sense as well. Its sweeping roof plane with a 5′ overhang all around is not just the lid that keeps the complex space construction from flying apart visually; it is also an exceedingly necessary protection against the sun and the driving rains. The raised floors on stilts and the catwalks in the sky are not just part of an extravagant esthetic composition; they also assure that Cuba's cool breezes can sweep right through the house and help air condition it during the hot and humid months. (Actually, the owners insisted upon having dining and bedrooms air conditioned, though the architects felt—and still feel—that this was unnecessary.) The pools under the raised portion of the house provide the water needed for the cooling system! Originally, the long, north-south pool extended all the way into the bar-foyer; but after some of the Novals' guests staggered into its cool waters—their judgment having been impaired by the local rum—the owners decided to fill in the indoor portion of the pool to discourage intemperate swimming. (Air-conditioning engineers will please note!)

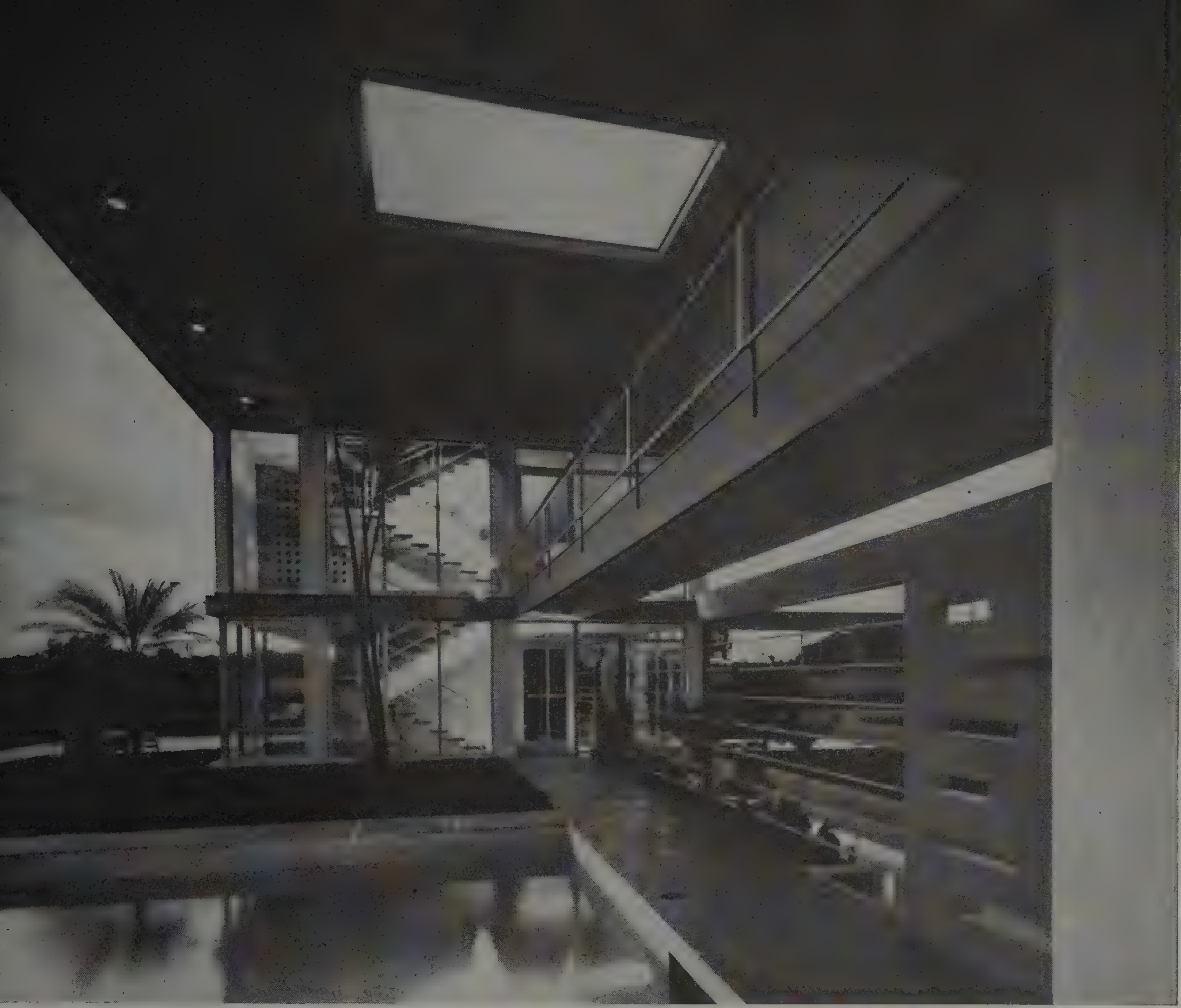
The raised portion of the house also creates a shaded outdoor area whose terraces, lawns and pools are really another living room for much of the year. Here again, then, an esthetic notion—Le Corbusier's *pilotis* concept, to be exact—has been used as an effective climate control device. And, finally, the west side of the house, with its exposure to the most murderous hours of solar heat, has large areas of blank walls: they look fine in contrast to the glass areas elsewhere, and they also keep out the sun when it most needs to be kept out. Orientation, incidentally, is due east-west: the breezes come generally from the east, by day and by night, so that the house can be turned into a real breezeway; and the sun, striking only a minimum wall area of the house in the course of each day, does not get a chance to heat up the walls unduly.



Diagrammatic sketches of Noval house show interpenetration of spaces, planes and forms. View above was taken from northeast, the one below from the southwest. Both indicate the way different levels were linked by bridges and the way spaces were allowed to flow together vertically as well as horizontally.



West facade has large, blank wall areas to keep out the sun



Sevifoto

View looking south toward entrance foyer. Swimming pool is in foreground

Zubeldia

Form and function in harmony. Needless to say, the Noval house will have little direct influence upon run-of-the-mill modern architecture: contemporary house architects are not often called upon to ponder the problem of pools at the foot of cocktail bars, the problem of how to relate the swimming pool to the reflecting pool, the problem of where to entertain the client's male guests while the client's wife is entertaining her women friends (Mrs. Noval does it in the living-room house; Mr. Noval in the now poolless foyer-bar).

But while such delightful problems are no longer acute, the problem of how to make a house good *functionally* (in every respect) as well as good *esthetically* (in every respect) is present wherever architects care as much about the spirit of man as they do about his thermal comfort. And this house, with all its extravagant fun, has something serious to say on that subject to anyone who would care to listen.

HOW TO MAKE A SMALL HOUSE LARGER – AND GIVE IT PRIVACY

By investing extra time at his drawing board, builder-designer Edward B. Hawkins of Denver added value to his small flat-tops

These small flat-tops have been so designed that they look a lot bigger than their 855 sq. ft. suggest, and so designed that they offer a sense of privacy, indoors and out, usually found only in much larger houses on bigger lots.

To make his small houses look bigger Edward Hawkins:

1. Put them on wider (70′) lots.

2. Lengthened his horizontal lines by tying each house to its next-door neighbors' with masonry block walls. This made each house almost as wide as the lot.

3. Used wide overhangs of 4′ on the front and 3′ 4″ on the sides.

4. Emphasized horizontal lines by a wide fascia, bands of windows, raked out horizontal masonry joints, and with strong shadow lines cast by the front overhang.

5. Designed the garage as an extension of the house.

To give his buyers more privacy, better outdoor living, he:

1. Set each house at an angle to the street, to give longer, more private vistas from front and rear windows.

2. Gave each house a small rear terrace that is private because of the angle of the house. (*See plot plan opposite.*)

3. Provided high wood fences at the sides and lower fences at the rear as an optional extra which all families bought.

4. Concealed service yards behind walls at the sides of the houses, kept rear yard clear for lawn or garden.

5. Kept garages in front or at side of the houses, so they serve as buffers between rear yard and street.

6. Put each house approximately in the center of a 70′ x 105′ lot. The front setback (and placement of house at an angle) gives the front living room of most of the houses some privacy from street traffic.

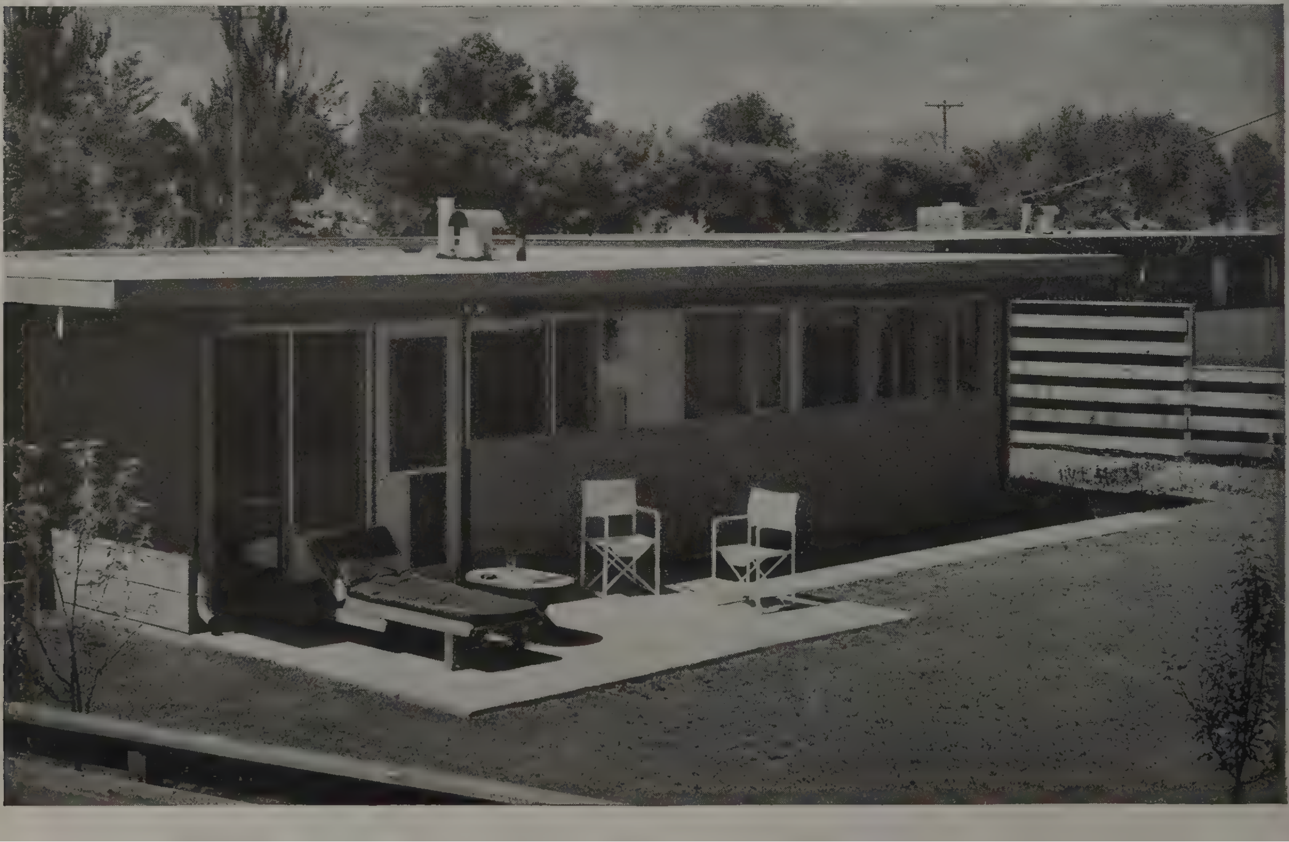
7. Prevented neighbors from looking into bedroom windows because of angle of house and high fences.

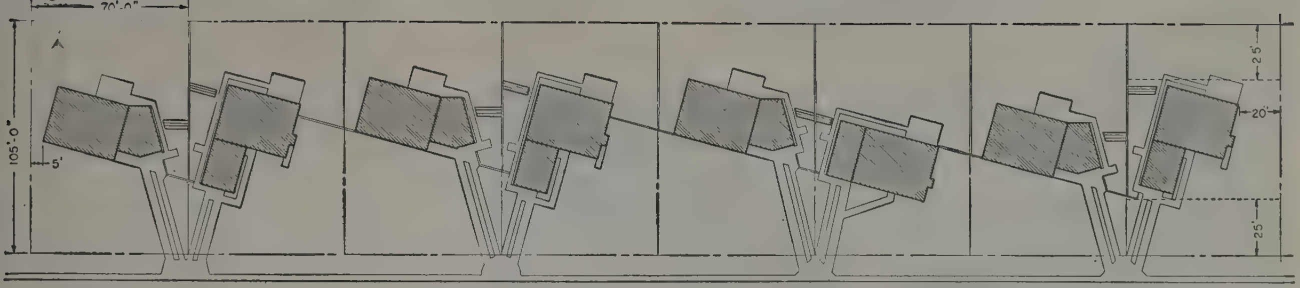
Lots 70′ wide

Basic to Hawkins' planning was a lot 70′ x 105′. Although this is actually 200 sq. ft. less than a typical 60′ x 125′ lot, it appears

Private rear terrace *and fenced sidelines are great sales attraction. Rear facade is as well designed as front.*

Photos: Guy Burgess





Plot plan *shows how houses are built in pairs, set at angle to the street, how rear terrace is located for privacy.*

considerably larger. Houses are placed so front yards are ample. Rear yards provide all the lawn a family is willing to water (which in Denver must be done most of the summer). This wider lot, with a house that seems to cover the entire width, is the single greatest feature in making the house look large.

A second design influence was the east-west street, causing all houses to face south in the block where the first project was built. To let in the cheerful south sun, he put the living room in front, with floor-to-ceiling windows on the street side. Yet his plan has some of the effect of a continuous front-back living-room house because the open dining area has floor-to-ceiling windows and a door to the rear terrace.

These houses clearly demonstrate how much eye appeal a well-planned rear living area can have. Hawkins supplies a small, paved terrace, but far more important, he planned his houses so that the terrace amounts to something. As the plot plan above illustrates, the terrace is far enough from the sidelines so there is privacy, and each house is located so that people on one terrace do not look into the adjacent terrace.

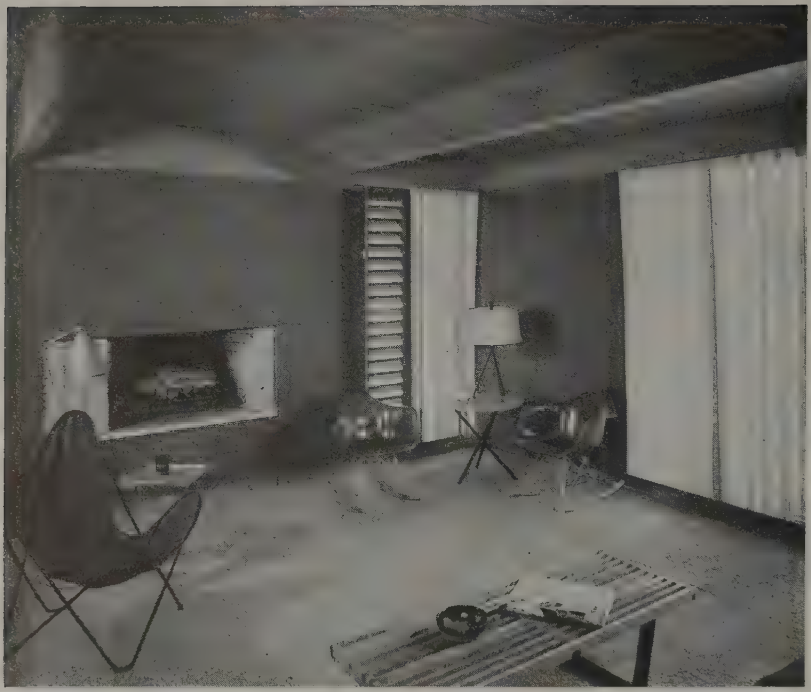
His back yards are uncluttered with garbage cans and junk because his wide lots and walls between houses permit him to use side yards for incinerators, clotheslines, garden tools and outdoor storage. Highly important to the success of his rear terrace are the solid wood fences—a $3-a-ft. extra that every family has been willing to pay for.

Inside the house

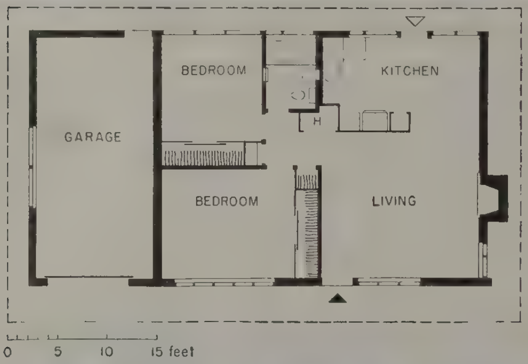
There are three variations of one floor plan. The garage is shifted from side to side and is built pie-shaped or rectangular. There are also slight variations in the front facade and its window arrangements. Hawkins gets a considerable individuality from the colors of his brick and the colors he paints his pumice block, front siding, doors and gates.

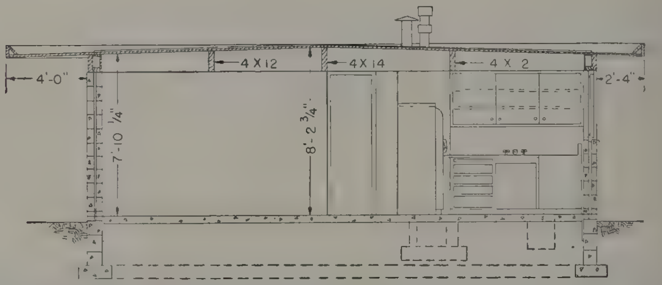
For an 855 sq. ft. house this plan has a lot of usable space. The small center hall serves as an entrance to both bedrooms, bath, coat closet, linen closet and the furnace room. A storage wall

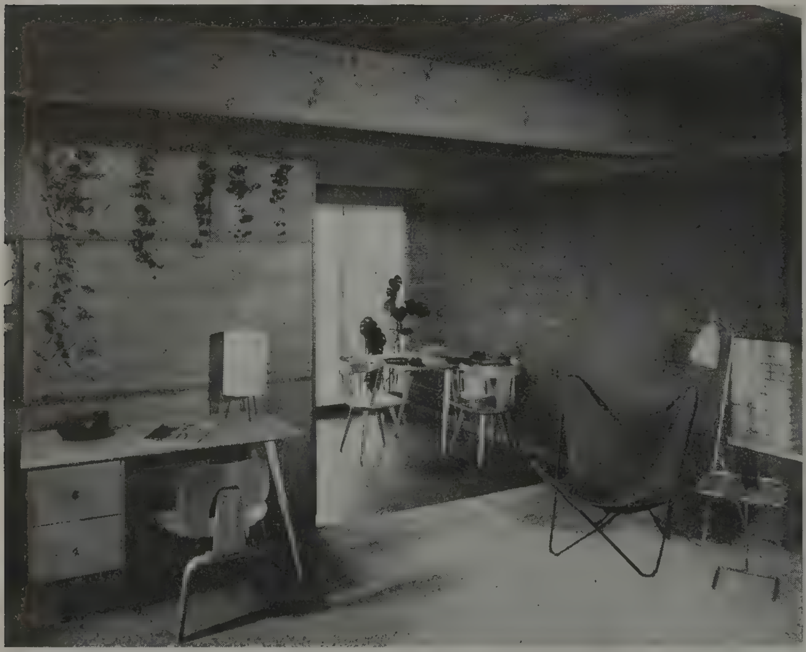
Pumice block walls *connect the houses, below, make them appear larger and hide side service yards.*



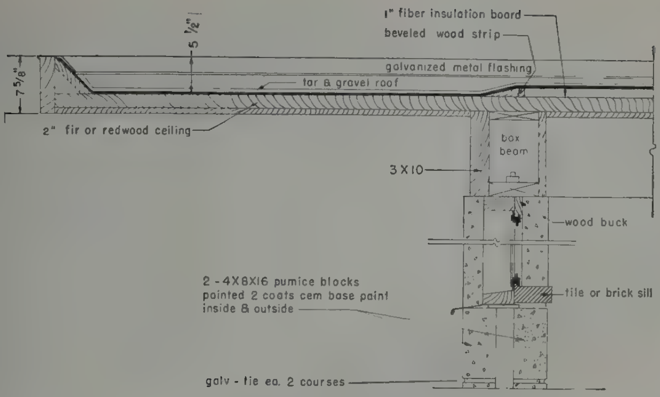
Houses with fireplaces *sell for $13,500; those without for $13,000. Rough-textured pumice block, left, painted in soft colors, complements Philippine mahogany finishes. At right of fireplace are floor-to-ceiling louvers for ventilation. This handsome room is 14'-18" x 15'-8" which, with its floor-to-ceiling windows, becomes a real asset in a small house.*







Floor-to-ceiling windows *opening the dining area to rear terrace are seen from the living room (left). Free-standing partition between living room and kitchen is nonload bearing. Heavy 4" x 14' beam in center gives solidity to interior and adds to attractive quality of wood ceiling and other wood finishes. All floors are covered with asphalt tile.*


1" fiber insulation board
beveled wood strip
5 1/2"
7 5/8"
galvanized metal flashing
tar & gravel roof
2" fir or redwood ceiling
box beam
3 X 10
wood buck
2 - 4X8X16 pumice blocks painted 2 coats cem base paint inside & outside
tile or brick sill
galv - tie ea. 2 courses

forms a sound baffle between the two bedrooms, and the front bedroom is similarly separated from the living room.

The 14′-8″ x 15′-8″ living room seems spacious because of its open plan. One bedroom is 13′-8″ x 11′, the other is 10′-8″ x 10′.

The kitchen is not close to the front door or garage but Hawkins says families like a rear kitchen for its convenience for serving meals on the terrace.

Many of the windows have fixed sash. Hawkins has used floor-to-ceiling movable louvers to provide ventilation, as the interior photographs show. These might not provide enough ventilation in the deep South but are ample for mile-high Denver.

Sales slowed by big down payment

Of his 14 houses of this type, Hawkins has sold ten. (Three of the unsold are still under construction.) He is sure the down payments of $3,350 and $4,050 have kept away many buyers. But from the favorable reaction of people who have seen the houses he is satisfied he has a design that will please a strong though limited portion of the Denver market.

Construction methods

Houses are built on a conventional 4″ slab resting on 12″ of gravel. Cavity walls are of two rows of 4″ x 8″ x 16″ pumice block with a 2″ air space between. Hawkins has built numerous houses with this construction and reports his buyers find them warm in winter. Interior walls are left rough and painted in attractive colors, a practice followed in many more expensive houses.

The built-up tar-and-gravel roof appears flat but has a 4″ pitch from midpoint to eaves, as the drawing opposite shows.

Heat is provided by a reverse-flow, gas-fired furnace forcing warm air through a radial system of 8″ sewer pipe in the slab to ten narrow registers under windows.

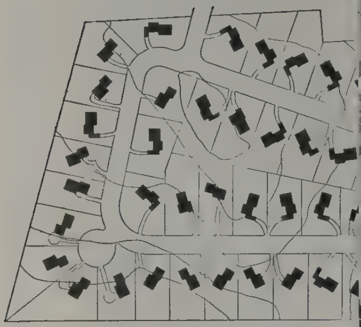
Hawkins subcontracts his slabwork, plumbing, heating, electrical work and roofing. His men do all the carpentry, millwork and masonry. He provides basic landscaping.

Compared with the big contractors of Denver Hawkins is a small builder. But he is a commendable example of a builder doing a good job for buyers who want contemporary designs in small, attractive neighborhoods.

Another view *of a rear terrace showing how fences between houses assure real privacy for outdoor living.*

Front and side fences *turn this space into a highly usable storage and service area, give bedrooms privacy.*

Hawkins *includes garbage grinder, automatic clothes washer and exhaust fan, but not the stove or refrigerator.*



Patry Carr

Basementless house *with 1,100 sq. ft. sells for $14,500*

PREFABBED PANELS PAY OFF FOR A SMALL BUILDER

Painstaking planning, highly efficient framing

produce low-cost ranch houses in colonial New England

LOCATION: Westport, Conn.
P. WM. NATHAN, INC., builder
HARDING, DRISCOLL, & BRIGHT, land planning

Can builders—big or small—cut framing costs by prefabricating their walls in panels?

Many have tried it, notably Fritz Burns of Los Angeles. Most have decided the answer is no. But here is a smart small builder in high-cost Connecticut who believes he has worked out a panel and truss system that cuts his framing costs 20%, saves $400 to $450 on each of his 1,100 sq. ft., $14,500 slab houses. Half the economy, he figures, is on labor, half on lumber.

His system takes only 21 panels per house—seven are 4′ wide, the rest are 8′. Four carpenters put them in place and after scaffolding is up (a 90 min. job) the same crew plus four more carpenters from the shop erect the 26 roof trusses in 35 min. The entire house is framed and the roof sheathed in less than a day.

The builder is William Nathan. As Lustron's New England sales manager (1948 to 1950) he sold himself on the economy of panel construction. Now he has translated the panel idea from metal into wood.

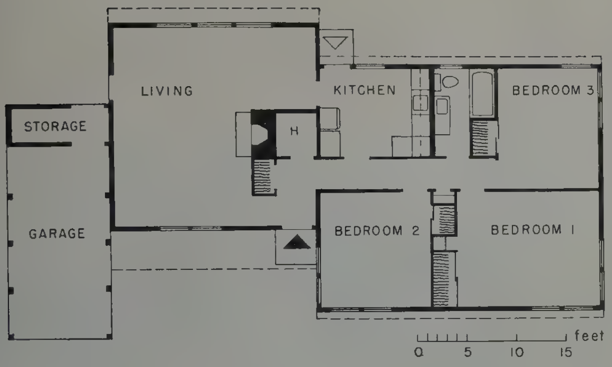
Nathan has avoided most of the mistakes builders are apt to make when they try prefabrication, in the opinion of Fritz Burns' construction boss, Dave Slipher. For example:

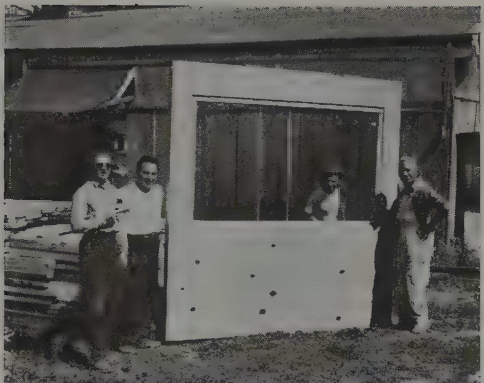
1. He has kept his panels light enough so two men can handle them easily. (His heaviest 8′ x 8′ panel weighs 150 lbs., the 4′ x 8′ only 75 lbs. They consist only of studs nailed between 2′ x 4′ shoe and plate and covered with ½″ plywood sheathing, with door and window openings framed in.

2. He has no handling-damage worry, since his panels will be completely covered after erection by exterior shingles and interior wallboard.

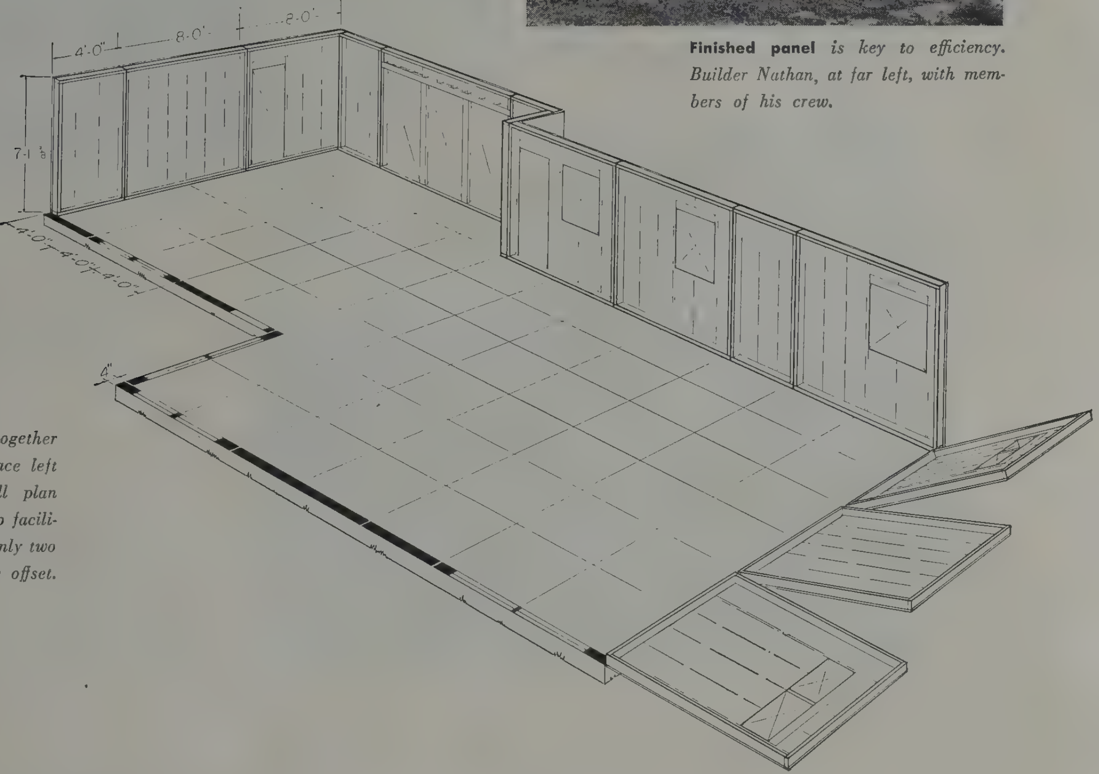
3. He has almost no plant investment to write off —only $750 for his shed, $80 for his jigs. And out of this he will salvage the roof trusses and wall panels to build his last house.

4. He has not pushed prefabrication far enough to run into trouble with any of the trades.





Finished panel *is key to efficiency. Builder Nathan, at far left, with members of his crew.*



Individual panels *are joined together for all walls except for 12′ space left open for picture window. All plan dimensions are multiples of 4′ to facilitate construction with panels. Only two extra panels are needed for the offset.*

On the positive side, Nathan himself lists five major reasons why his prefabricated framing system cuts costs:

1. Modular design minimizes material waste. His panels just fit the standard 8′ x 4′ dimensions of exterior plywood sheathing and interior wallboard, conform to the 8′ 3/8″ standard ceiling height jointly urged by AIA and NAHB which was also set to use 8′ x 4′ materials.

2. Carpenters need lose no time figuring things out and scratching their heads. In the shop, jigs give them a precise pattern to follow. On the spot, they have so few pieces to assemble that they do not need blueprints.

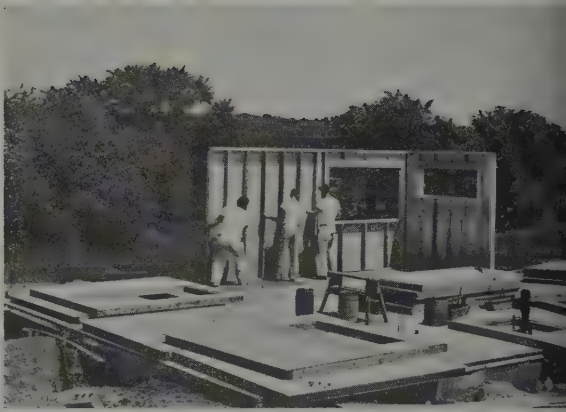
3. There is less material handling on the site. Carpenters do not have to carry materials all around the house. Roof trusses (weighing 200 lbs.) are unloaded from trucks right to the roof scaffold.

4. As in tilt-ups, jigs square and dimension panels accurately, so carpenters lose very little time lining them up before they bolt them to the sill and nail a top plate across the top. (Sills are leveled on cinder-block foundations before slabs are poured.) Also they lose no time leveling door and window openings.

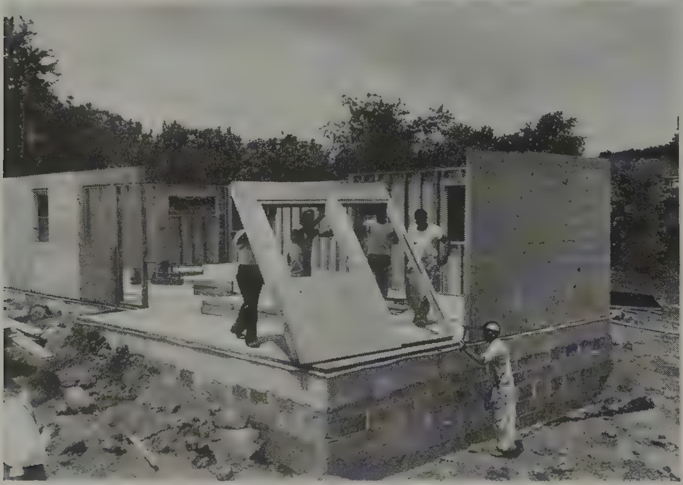
5. He figures he saves over 1,050 board ft. of framing lumber—425 in the walls, 625 in the roof (1,975 vs 2,600). (His 4′ in 12′ pitch permits more economical truss design than flatter roof.) Stud lumber saving comes partly from nonbearing end walls and interior partitions, for which he can use 2′ x 3′ studs. Panel construction lets him take advantage of the plywood stressed skin to space many bearing wall studs 24″ apart. (With this wider spacing he uses ½″ gypsum board instead of 3/8″, pays from ½ to 1¢ a sq. ft. more for it.)

6. Panel standardization lets work go on rain or shine, so Nathan can operate with a small picked crew of 13 carpenters and laborers and give them steady work. On clear days five carpenters work in the shop—one at the electric saw, two on the panel jigs, two on the truss jig turning out five trusses an

Two men on jigs *make all panels for one house from precut lumber in less than a day. Two extra jigs in background are used on rainy days when four men make panels for future houses.*



Five minutes *after unloading (which takes 20 mins.) third panel is erected. The builder is still experimenting with stud spacing. Although 24" o.c. is ample for wall strength (with plywood panels), some studs are spaced closer so that the plasterboards will not bend between studs.*



Twenty minutes *after walls are started eighteenth panel is lifted into place, left. End 2 x 4s of adjacent panels are spiked together. Panels are quickly lined up over plate around perimeter of slab. After walls are up, a top plate is nailed over all panels before trusses are erected.*

hour (daily payroll $108). But when it rains two more jigs are used, and sometimes enough panels for four houses are nailed together in a day. (Biggest time-saving on jigs is on panels with door and window openings.)

Nathan's plan uses 21 panels. The seven narrow ones are all solid fillers. The 14 wide ones include:

Three solid plywood
Three with two double-hung windows
Three with two high bedroom windows
One with one double-hung window
One with bathroom window
Two with a rear door and window (one to kitchen, one to garage)
One with front door.

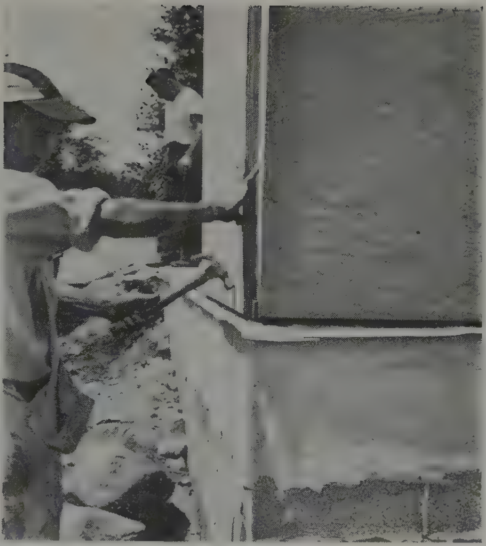
There is no panel for the 12′ wide picture window which is built on the site after the prefabricated panels are in place.

Success of standardization is vividly illustrated by the way efficiency increased from house to house. It took four men 3½ hrs. to put up panels for the first house, 2 hrs. for the second, and by the ninth house, they were down to 30 mins.

Erection time for trusses followed a similar downward curve as the men became more and more familiar with their work.

Nathan subcontracts all his work except framing and trim, feeling his volume is too small to warrant his doing the other work himself. He is sure his wallboard sub could cut his costs hard by following the "one man" method by covering exterior walls and ceilings before interior partitions are in place, but the sub prefers to do things the old way. He also figures he could save time and money and get a better roof if the local code would let him use ½″ plywood sheeting in 8′ x 4′ sheets on his roof instead of 1′ x 8′ boards. One time saver he does use is to avoid all cutting and fitting in his plumbing wall by

Plywood overlap *is nailed to perimeter plate, right, embedded flush with the top of the slab. Filler pieces take up corners.*



Thirty minutes *after walls are started last panels flank picture window. Header is cut on job because a few inches leeway must be allowed with panel construction. Picture window is placed in front or rear wall (and panels reversed) depending on the exposure of the particular house.*

Using precut lumber *two men make five trusses an hour. Trusses are bolted at ends and top, pitch 4′ in 12′. Nathan shied away from smaller pitch because of possible sales resistance to flat roofs. Also, less pitch would have required much heavier truss construction.*

running two lines of 2″ x 3″ studs (on 24″ centers) on either side of the pipes.

Floor plan with two offset rectangles was worked out by Nathan and his wife and offers several interesting advantages. Offset gives cross-ventilation to every room except kitchen and bath, permits minimum entry at the very center of the house with direct access to kitchen and bedroom hall. Circulation is excellent, for occupants can reach every room through the hall without going through any other room. Chimney, carefully located to fit between trusses, serves utility room too.

Narrower width of the living-room rectangle lets Nathan use the same 26′ roof trusses to create a 4′-10″ overhang to shade the floor-to-ceiling window wall. This overhang economy helps pay the $87 extra cost of offset. (Elsewhere overhang is 10″.)

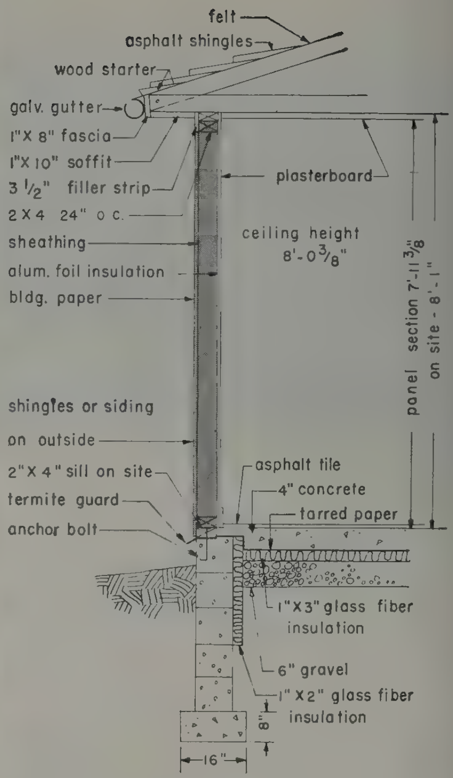
The plan lends itself easily to variation by just shifting panel sequence. Big living-room window and roof overhang can be put front or rear for orientation. High bedroom windows usually face north. Overlap of panels follows itself around house, so dimensions are 48-8″ (twelve 4′ modules plus 4″ overlap at end and offset) by 20′-4″ and 24′-4″.

Nathan's slab house has a carport and storage room for $14.500. Each slab house includes an electric stove, refrigerator, and washing machine. Because slab houses meet with some sales resistance in New England he offers the basement model with garage (at $16.200). Fireplaces are included in both ($400 cost to Nathan) since they are practically mandatory in rural Connecticut. Smallest lots are 1,100 sq. ft. and wherever possible he managed to save the old trees.

Success of the 43-house development is virtually assured. Twenty-four buyers have already signed up, three others have paid out $50 for binders.

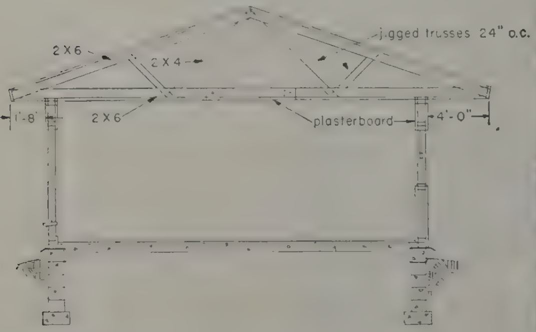
The sequence of photographs on these pages shows how Nathan's men erect walls, trusses and close in a house in one day.

Erecting trusses *is a smooth operation. Before this truss work begins it takes 80 mins. to put up the scaffolds and brackets.*

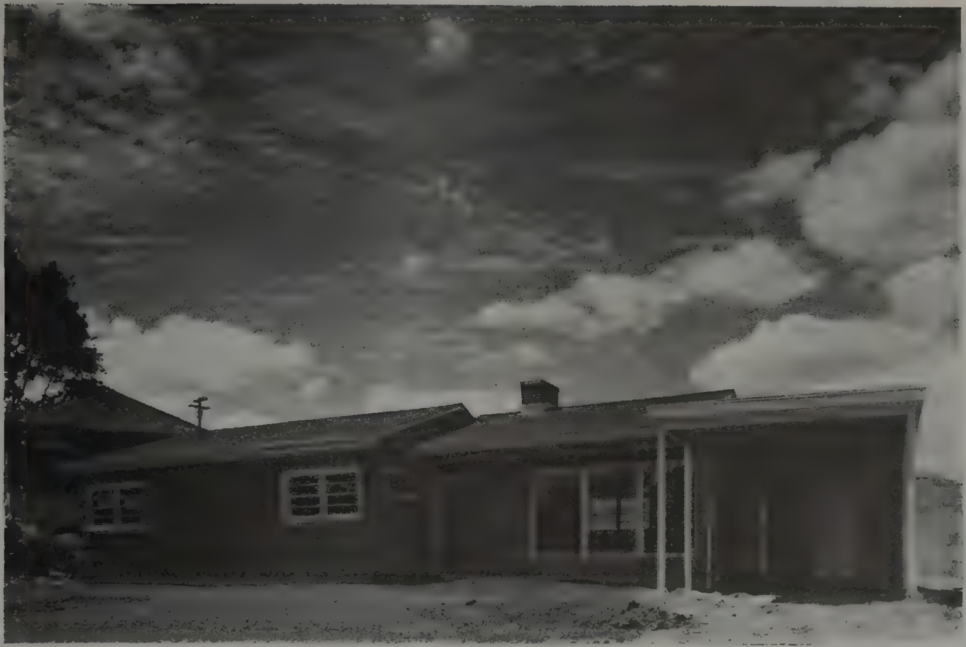


Ceiling height *of 8'-0 ⅜" is the recommended AIA-NAHB standard. Nathan uses ½" plasterboard for extra strength although ⅜" thickness is permitted here.*

Thirty-five minutes *after trusses were unloaded, they were in place in this house. Superintendent in foreground directs the operation. Since all trusses have identical dimensions, they are easily aligned and present no leveling problem.*



At the end of the day *house is closed in by four men who put 1' x 8" sheathing on the roof. This operation could be speeded up with ½" plywood panels for sheathing but when trusses are on 2' centers local code forbids ½" plywood.*



Photos: Patry Carr

Finished house *is characterized by the horizontal look. Heads of all doors and windows line up and bottoms of high windows line up with center bar of double-hung windows.*

Basement model *with garage sells for $16,200*

COST BREAKDOWN

Land, water, streets, grading	$2,325
Foundation, slab, fireplace etc.	1,370
Lumber & millwork	2,140
Carpentry & labor	928
Plumbing	775
Heating	990
Electrical	290
Siding & roofing	615
Sheetrock & painting	940
Insulation	105
Bathroom tile	160
Glass	80
Hardware & fittings	150
Asphalt tile	212
Kitchen equipment	615
Cabinets	225
Financing, sales & misc.	1,120
Overhead, fees, permits, etc.	510
Extra landscaping	100
Profit	850
Total	$14,500

Varied appearance *is achieved by reversing offset*

New frontiers for homebuilders

Just published by the Southwest Research Institute of San Antonio is a 91-page book, "New Frontiers for Homebuilders," written by C. W. "Bill" Smith, director of the Institute's Housing Research Foundation. Based on what Smith has learned in working with builders from coast to coast during the past three years, the book is considered so definitive by the NAHB's Frank Cortright that he writes in the foreword: "I would like to see it read by everyone in and out of the homebuilding business. The book issues a challenge by setting up new and important objectives." These are excerpts from Smith's text:

Don't sacrifice quality for variety

". . . wasting money on a mixture of bird houses, false gables, shutters and meaningless variations of exterior materials and colors"

Most bad housing projects are characterized by a conscious effort to achieve dissimilarity in the appearance of the houses. Apparently this concept of what constitutes a good neighborhood is based on the dissimilarity of houses in older areas built up by custom contractors.

Where builders attempt to use a great variety of house plans they are inevitably inferior in quality because the cost of competent architectural services is prohibitive when it must be amortized on one or a very few houses. No architect worthy of the profession can do a capable job of designing a single house for less than 10 per cent of the cost. An architectural fee of $1,000 or more per house is simply out of the question if merchant builders are to continue economical housing.

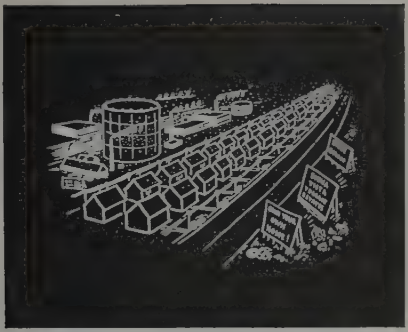
Furthermore, the whole objective of achieving dissimilarity between houses in a project group is basically unjustified. Simply because older neighborhoods happened to be built up without any over-all plan and with no architectural similarity between the houses is no reason why we should try to duplicate those older neighborhoods today. Experience has demonstrated that it is far better to have a community group of houses entirely designed by one architect, confined to one or a few basic plans to fit the community, and so placed on the lots as to lend distinction and beauty to the project.

Don't waste money on apple crapple

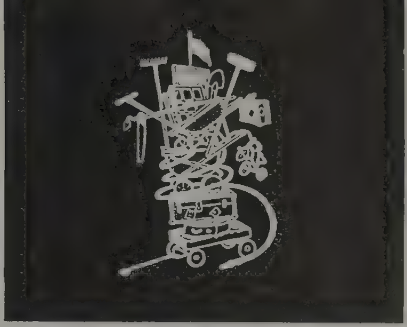
Too often builders using basic plans repetitively try too hard to achieve dissimilarity by wasting money on a mixture of bird houses, false gables, shutters, and meaningless variations of exterior materials and colors. If the basic plan is good this is unnecessary, and anyhow ornamentation never does disguise similarity of the design and structure. The same amount of money spent in advance on a good site plan to create a community group with the houses placed on their lots more logically would add far more value to the project; in fact it would create superior values unobtainable any other way.

Don't be "smug" about a seller's market

The subject of architecture has always been a controversial one with merchant builders because, in the seller's market builders have enjoyed in the past, purchasers were forced to buy whatever was offered. Many builders, able to sell houses of inferior design, concluded that the public was satisfied with neo-Cape Cod and neocolonial abortions and saw no reason for spending money, time or effort on an architect. Now the better builders are upsetting the market and making the public more discriminating because they have learned that using a good architect to design clean contemporary houses, without the gimcracks of the past finds an immediate and enthusiastic response on the part of the public.



". . . this matter of site planning"



". . . one of the greatest shortcomings in most plans is lack of adequate storage space. . . ."

". . . the delays and expenses in purchasing and financing a house. . . ."

Don't try to hire a cheap architect

A few years ago it was very difficult to find architects who understood the merchant builder's problems, his techniques of repetitive construction, the economies which can be obtained through teamwork collaboration, the advantages of using standard-sized millwork, and other time- and labor-saving methods. Even today some merchant builders think of an architect as an impractical dreamer who draws pretty pitctures but knows nothing about costs. It is perfectly true that some architects fit this concept. There are good and bad architects, just as there are good and bad builders. It is very encouraging, however, to note that in all parts of the US today there are capable architects who are learning to work with merchant builders and who are realizing that this is a profitable and most satisfying field of endeavor.

More and more builders find they can increase their profits through using the service of a capable architect, which either lowers the over-all cost of their houses or inevitably adds more value than the amount of the architectural fees. Incidentally, typical architectural fees for merchant builders have been very modest. They amount to about $200 to $300 per house for groups of 10 to 20 moderate priced houses. For projects involving as many as 100 houses, the very best architectural services seldom cost more than about $75 to $100 per unit.

One danger we should warn all builders about is trying to employ a "captive' 'architect as one of their regular staff. In the first place, an architect's skill and professional ability is enhanced by his independence and his freedom to work on a variety of different designs and projects. Second, architects who are on the permanent staff of a builder may hesitate to argue with the "boss" when they know he is wrong.

". . . capable architects . . . are learning to work with merchant builders"

Don't let traffic get snarled up

A good architect will recognize the importance of striving for maximum goals instead of merely attempting to meet minimum construction standards. He will either have, or must acquire, a detailed knowledge of the local conditions which will affect the design. In every community and in every geographic area there are differences in materials costs and availability, labor costs, community preferences and climate factors to consider. Your architect will give primary consideration to site planning so that the house is properly placed on the lot to take advantage of views, summer breezes, winter sunlight, the natural features of the site, and to provide privacy for family living indoors and out. He will try to make the most efficient use of the floor layout so as to avoid awkward traffic through the living room or such odd situations as people having to go through the kitchen to get to the outdoor dining space or the garden. The garage or carport will be placed adjacent to the kitchen or utility-room entrance with an overhang or other shelter to provide easy access.

Don't overlook the open kitchen

Since exhaust fans in the kitchen can remove objectionable odors, it is no lor
necessary to shut the kitchen off from the dining space and the rest of the ho
Planning rooms for more than one use and giving an "open" feeling to
whole living area gives a sense of spaciousness even when the house must,
cause of price limitations, be relatively small.

Don't forget space for air conditioning

We predict that before many years very few new houses will be built witl
summer cooling equipment and it would be wise, even now, to provide suffic
space in the utility room for a summer cooling unit to be installed in connec
with the heating system.

Every good builder has learned that it pays to select materials and item
equipment which are of high quality and will provide long service without
quiring frequent repairs or maintenance. In many instances it is actually
expensive to use materials which, in themselves, may cost slightly more
the cheapest available, but which can be installed with less labor.

Don't stick to last year's model

Styles change in houses as they do in women's clothes but less superficia
To a great degree they reflect both the practical needs and the esthetic expres
of a particular society. Cape Cod and colonial houses fitted our pioneer econ
very well, just as bustles and corsets were probably appropriate in the 18
(But) your wife would not wear 19th-Century clothes today and people
longer want to live in 18th- and 19th-Century houses. It has often been said
the public is far ahead of the building industry in the matter of housing de
Many builders doubted this until in recent years they have learned to their g
surprise that the most successful builders who are offering the public wel
signed contemporary houses are finding a tremendously enthusiastic recep

A design which is good today will not be as good ten years from now.
as there is a steady demand for new women's clothes based not on the fact
the old ones are worn out, but on the desire for new designs, so too will a
tinual and steady demand for new houses be realized when more builders st
late this demand by offering the public continually improved models.

Don't be limited by FHA

The mortgage finance policies which determine who can buy houses and
they can buy them are controlled very largely by the Federal Housing Adm
tration. The minimum construction standards promulgated by the FHA we
very fine development and one which quite properly established a floor b
which inferior construction practices were unacceptable. It is too bad tha
FHA stopped at that point and did not go on to defining the qualities of ap
ance, performance, and livability which should be the goal of every bu
and which should be held out to the industry as a basis for judging the v
of houses. Present FHA appraisals are geared only to minimum constru
standards. Builders who conform to these minimums obtain top appraisals
commitments. You who strive to obtain the utmost value and superior qu
in your housing projects are usually penalized because the FHA does not r
nize and has no machinery for giving preferential appraisals to projects w
achieve these superior qualities.

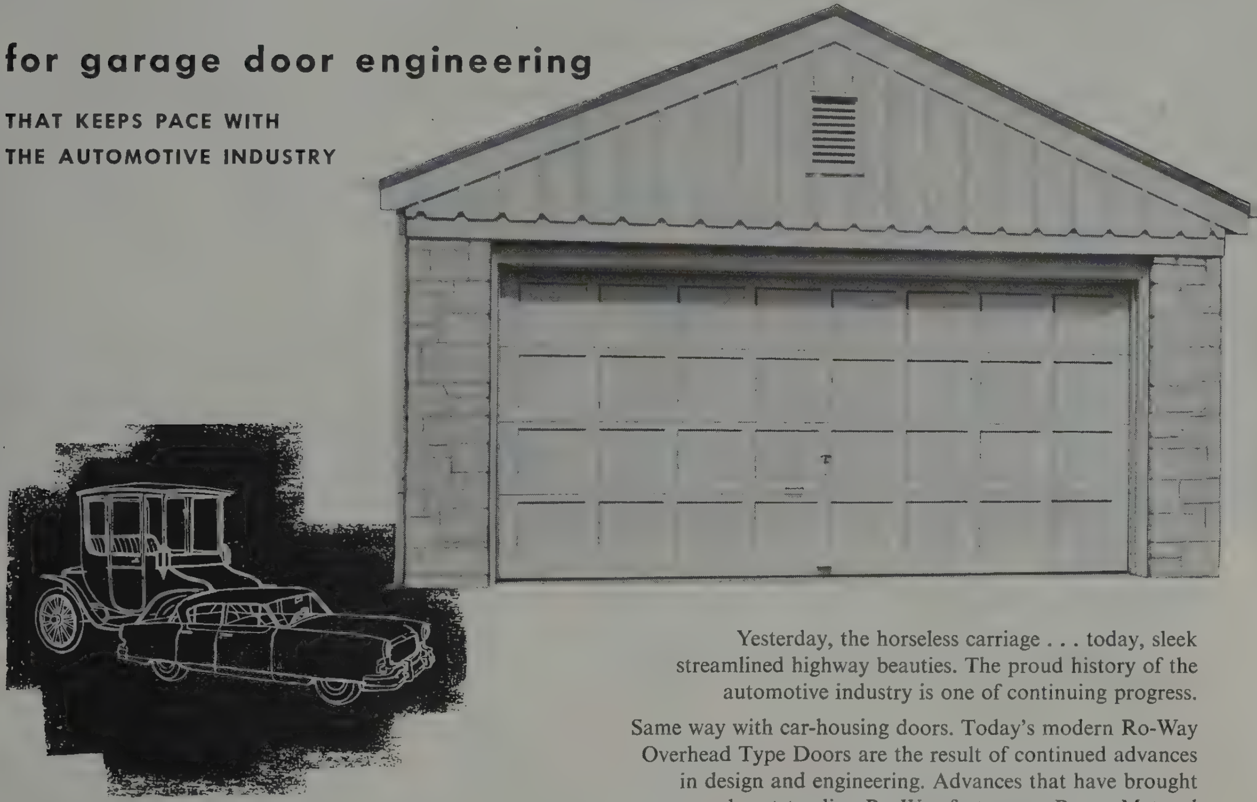
". . . styles reflect the practical needs . . . of a particular society"

(Illustrations on these pages are reprinted from the book.)

LOOK to RO-WAY...

for garage door engineering

THAT KEEPS PACE WITH
THE AUTOMOTIVE INDUSTRY



Yesterday, the horseless carriage . . . today, sleek streamlined highway beauties. The proud history of the automotive industry is one of continuing progress.

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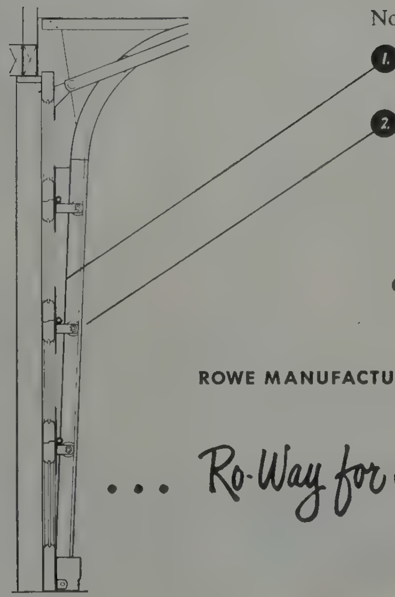

① **TAPER-TITE CLOSURE—Vertical tracks taper away from the side and head jambs at a pitch of ¼" per door section.**

② **SEAL-A-MATIC HINGES—of graduated height, guide the closing door tightly against jambs; these same hinges immediately free the opening door from jambs to provide easy, frictionless operation.**

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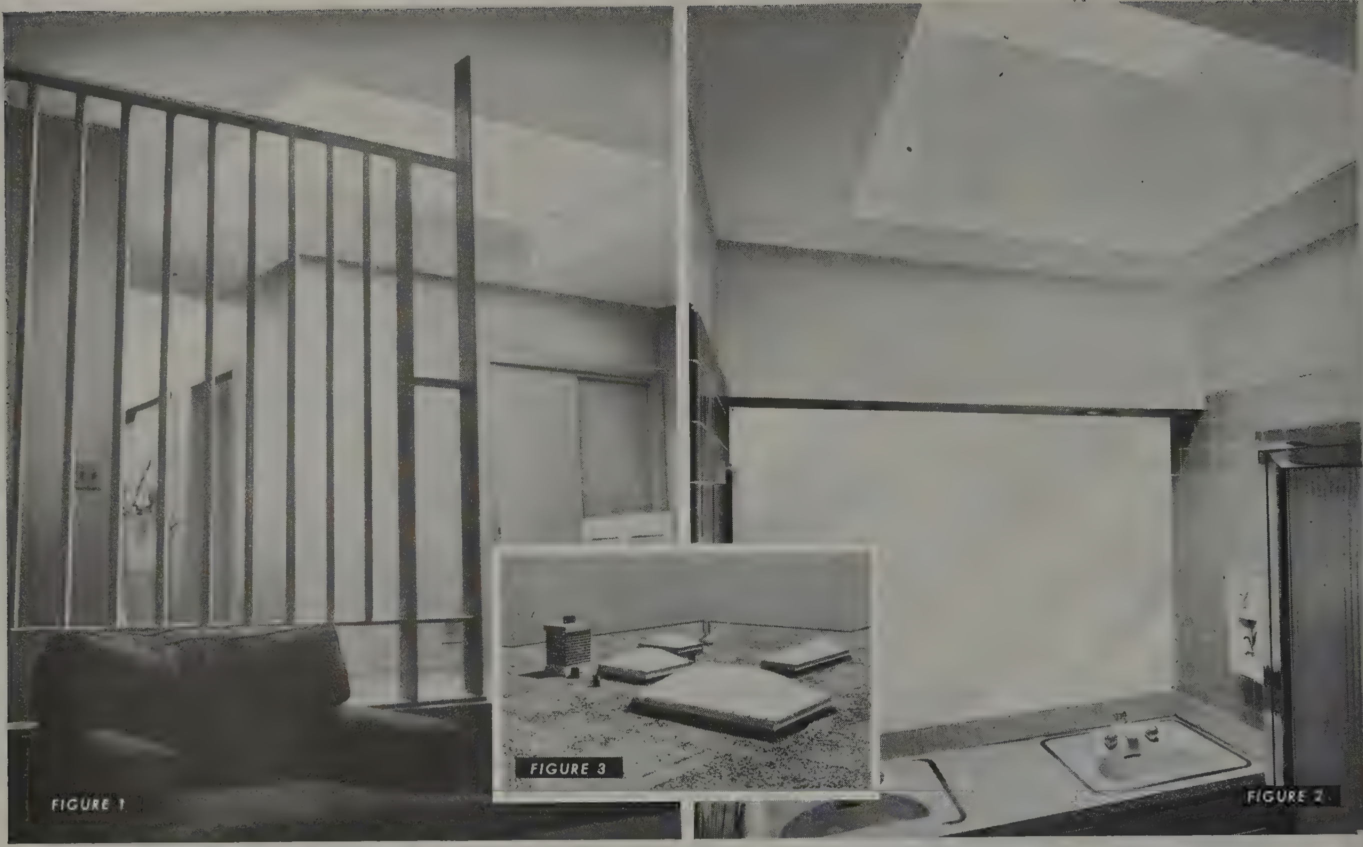

FIGURE 1

FIGURE 3

FIGURE 2

New rule for better interior planning:

TOP-LIGHT WITH WASCOLITE SKYDOMES

Every day more and more builders and architects are following a new rule of thumb to achieve better room arrangements . . . to obtain more living space without increasing over-all house dimensions. The rule: *top-light with Wascolite Skydomes.*

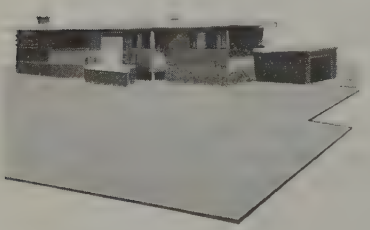

FIGURE 5

For example, Joseph S. Chaet, president of A-1 Construction Co., Chicago, Ill., commenting on the use of Skydomes in a recently completed residence shown here, says:

"By relieving exterior walls as the daylighting source for bathrooms and other service areas, Skydomes allowed expansion of the master chamber by 40 square feet as well as addition of a rear entrance hall". (See fig. 4)

Service areas kept inside . . . perimeter left free for living space . . . daylight with privacy . . . wall space increased without losing daylight . . . these are just a few advantages obtainable with Skydomes. Write today for full details on prefabricated, weather-proof, shatter-resistant Wascolite Skydomes. Wasco Flashing Co., 88 Fawcett St., Cambridge 38, Mass.

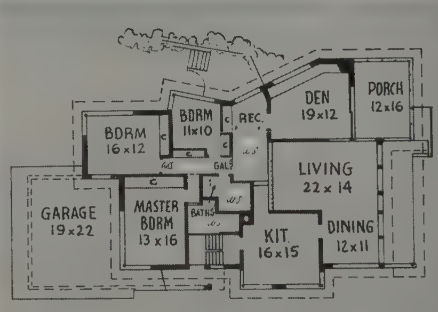

FIGURE 4

▨ Daylight from Wascolite Skydomes illuminates reception hall (1) and bathroom (2) in a residence built by the A-1 Construction Co., Chicago, Ill. Skydomes blend with architecture (figs. 3 & 5). In fig. 4 note top-lighted inside bathrooms and gallery subdividing bathrooms from sleeping quarters. This arrangement permitted extra-large master chamber and additional rear entrance hall.

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—designed to reduce the cost of building

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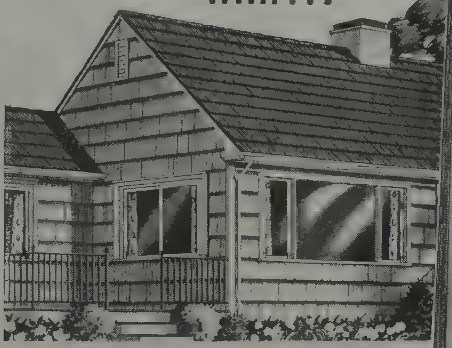

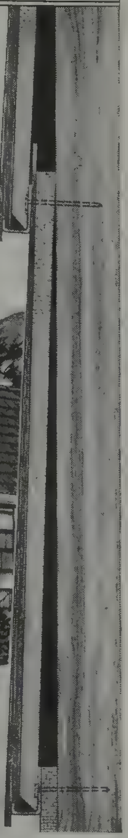

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The 8′ clip is placed on the bottom of the sheathing panel and the two are nailed together at each stud or rafter. The shingle is slid down the panel until the kerf in the butt of the shingle engages the clip. The second course overlaps the sheathing of the first course by 2″. Only 1½ lbs. of 8d galvanized nails are required per square.

There are no exposed nails to rust, stain or split the shingle; the shingles cannot curl. The quality of the materials used is of the highest; the total cost is extremely low.

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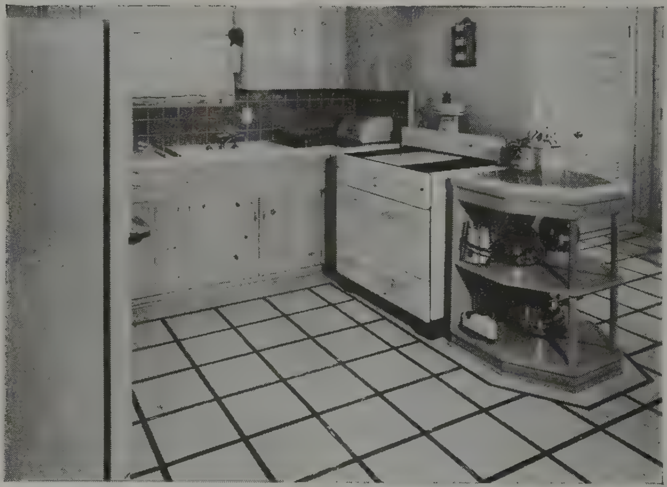

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FLOORS OF DISTINCTION
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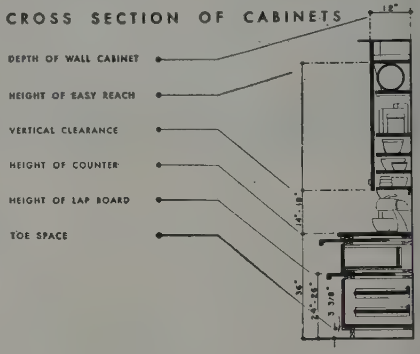
FARM KITCHENS AND UTILITY ROOMS.

Prepared by the Planning Research Centre, School of Architecture, The University of Manitoba, Winnipeg, Manitoba, Canada. 72 pp. 11" x 8".

Centuries before some phrase-conscious architects (or periodicals) coined "open plan," "multipurpose room," and "dining area," the farmer's wife was using her kitchen as an all-round living center. Directed at bringing rural homes up to date, this research report from our northern good neighbor sheds light far beyond the farm. In viewing the farmhouse as a small factory and its kitchen as the work core, the publication touches upon the *modus vivendi* of every servantless home and kitchen.

Three elementary—but frequently ignored—planning concepts make up the ground for the detailed standards set up in the study: build the cabinets to fit the housewife: build the shelves to fit the supplies; and build the kitchen to fit the family. Fortunately, many stock cabinets and appliances will meet the suggested specifications for heights and depths of work counters and storage space. It is up to the kitchen planner, however, to assemble these prefab objects into intelligent schemes. In this endeavor, *Farm Kitchens and Utility Rooms* should serve as a valuable reference book.

CROSS SECTION OF CABINETS



MODERN FURNISHINGS FOR THE HOME.

By William J. Hennessey. Reinhold Publishing Corp., 330 W. 42 St., New York 36, N.Y. 296 pp. 8¼" x 10¾". Illus. $10.

With a distinct bow to T. H. Robsjohn-etc.'s whole stable of pampered race horses and a sideward glance at Charles Eames's plywood classics, Mr. Hennessey has proceeded to compile this "comprehensive" catalogue of home furnishings. For the most part, the selections reflect the discretion of the author as well as the ultimate good taste of the contemporary-furniture-buying public (as evidenced by the Barcelona chair, adored for a quarter-century, Nakashima's warm and popular captain's chair, and consistent interest in beautiful materials simply handled). Upholstered kidneys, livers and other organs comprise only the

(Continued on page 138)

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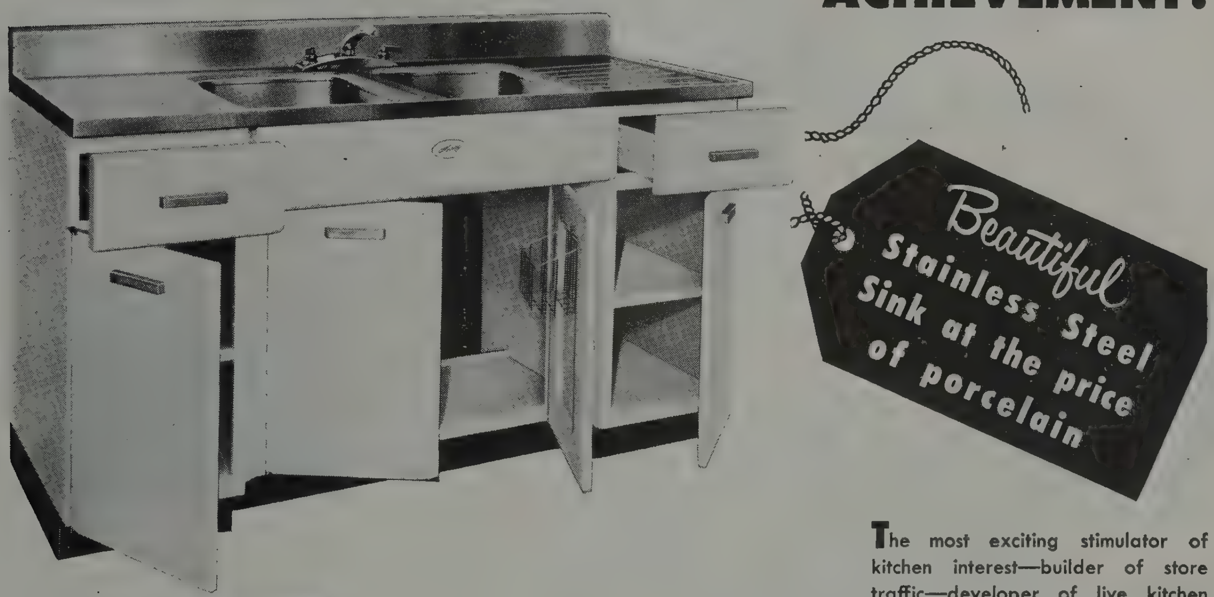

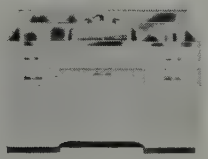

V-66-UMS a magnificent 66-inch sink with gleaming, lustrous stainless steel top, all-welded steel cabinet, finished in Dulux. Also available in 54″ as at left.

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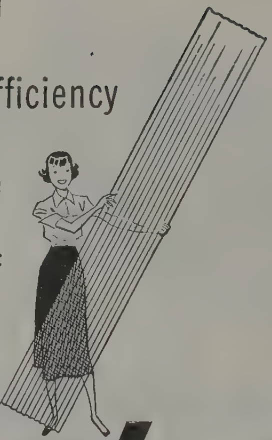
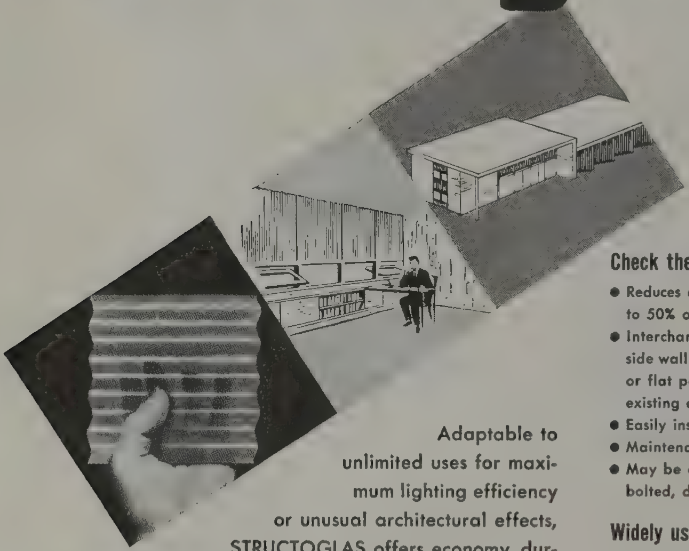


structoglas



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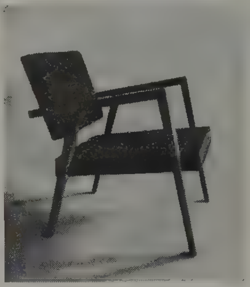
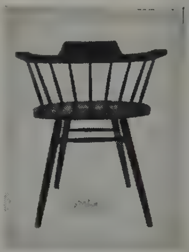
smallest minority of the furniture represented. Conspicuous by their absence are such notable pieces as Noguchi's free-form sofa and coffee table (although take-offs of the latter are much in evidence), George Nelson's storage wall, and Ray Komai's molded plywood chair.

There are 450 pretty pictures in the book, and to those unfamiliar with manufacturers' catalogues and advertisements, the pictures will be likewise. Digging his spikes firmly into first base, the author has elected not to make a running comment in the picture captions other than listing catalogue number, rudimentary specifications, designer, and manufacturer. All editorializing is confined to the $19\frac{1}{2}$ page *Foreword*—an excellent essay in itself, but the reader may wish for a more direct tie to the illustrations that follow. Thus the book falls short of becoming a unique and much-needed analysis of current tastes and trends in furnishings and remains a cross-sectional catalogue—without price tags.

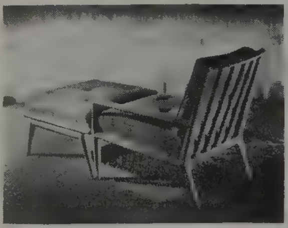


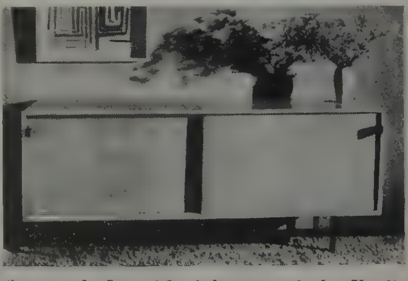
Knoll arm chair by Albini



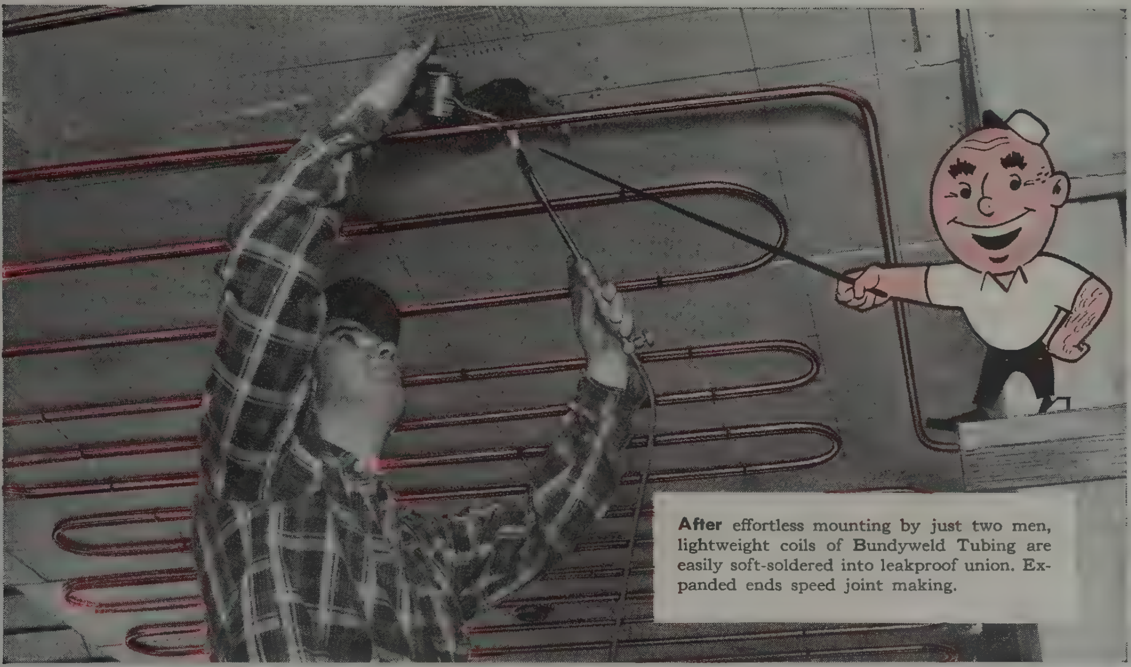
Nakashima's chair at right is made in walnut, birch or cherry.

Below, a sleek upholstered chair and heel cooler by T. H. Robsjohn-Gibbings.





Storage buffet with sliding panels by Knoll



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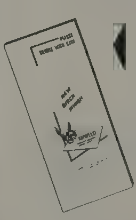
PLUS these new features

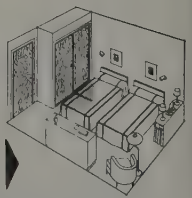
- *NEW* all hardware simply snaps in place.
- *NEW* two large non-tarnishing plastic door pulls snap in *each* panel.
- *NEW* lifetime nylon rollers provide easy, silent operation.
- *NEW* self-adjusting spring held nylon guide-keepers assure ease of operation and prevent sway and derailing. (Patent Applied For)

The original AMWELD Knocked-Down Steel Sliding Closet Door Units score again with door panels finished in baked enamel birch grain. No other finishing required. Baked enamel is enduring and so easy to clean and keep clean.



Everything complete in one carton. All hardware snaps easily into position. Easy-to-follow instructions enclosed. Available for 3 ft., 4 ft., 5 ft., and 6 ft. openings — two by-passing panels for each size.

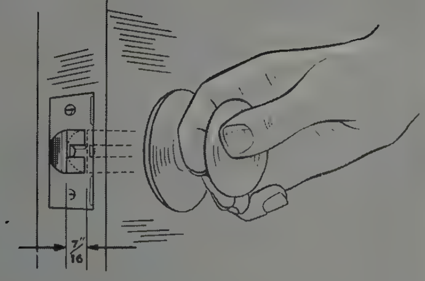
NOW MATCHES FLUSH BIRCH SWING DOORS—AND LOOK AT THE SPACE YOU SAVE . . . 6 TO 9 SQUARE FEET OF FLOOR SPACE.



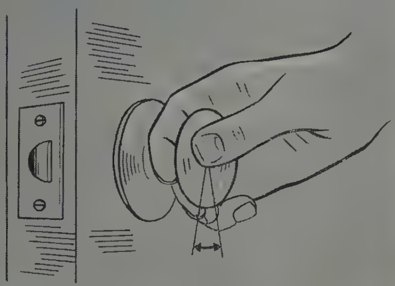
AMWELD Steel Sliding Closet Door Units are still available with grey baked on prime coat.

TO INSURE PROMPT SHIPMENT
SEND YOUR ORDER TODAY

AMWELD BUILDING PRODUCTS DIVISION
THE AMERICAN WELDING & MFG. CO.
330 DIETZ ROAD • WARREN, OHIO



FULL 7/16" BOLT THROW



SHORT TRAVEL RATIO

ANOTHER SPECIAL FEATURE BUILT INTO

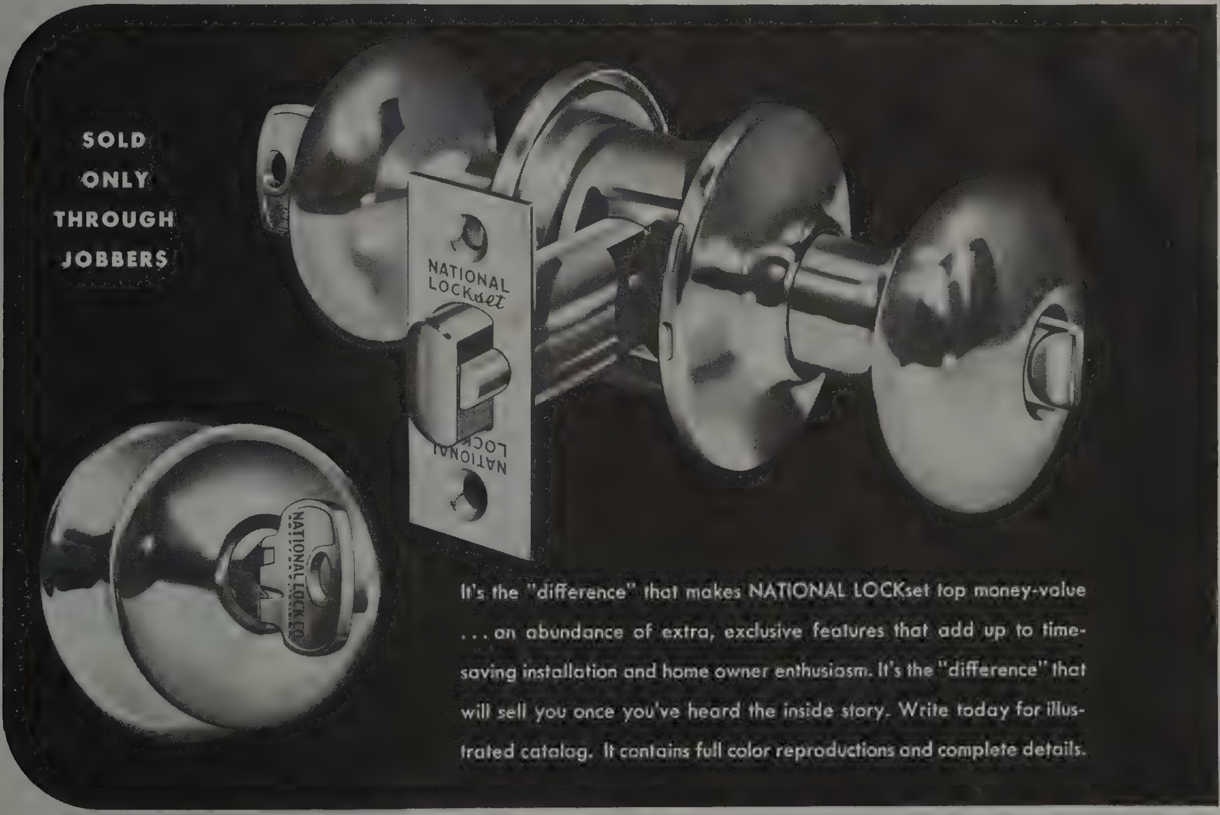
NATIONAL LOCKset

Patent Applied

Solid brass bolt "throws" a full 7/16" every time. Always a positive strike plate engagement. Bolt has dead latch feature that keeps latch engaged with strike plate . . . prevents unauthorized entry with knife or screwdriver. Specify NATIONAL LOCKset for extra security.

Engineered relationship between knob and locking mechanism reduces degree of "travel" — only 29° movement required. This important feature adds extra years to lockset life. It is another example of the plus value built into every NATIONAL LOCKset.

AMERICA'S OUTSTANDING LOCKSET VALUE



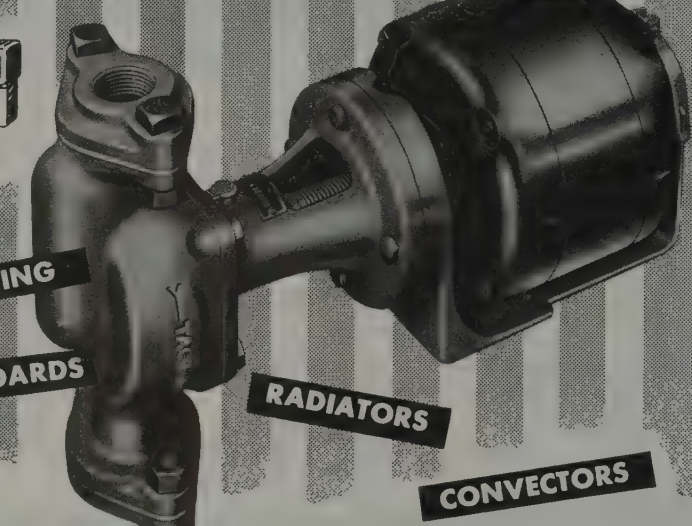
It's the "difference" that makes NATIONAL LOCKset top money-value . . . an abundance of extra, exclusive features that add up to time-saving installation and home owner enthusiasm. It's the "difference" that will sell you once you've heard the inside story. Write today for illustrated catalog. It contains full color reproductions and complete details.

DISTINCTIVE HARDWARE...ALL FROM 1 SOURCE

NATIONAL LOCK COMPANY

ROCKFORD, ILLINOIS • MERCHANT SALES DIVISION

get FAST, RESPONSIVE
HOT WATER HEAT for



with this popular TACO CIRCULATOR

EVEN LOW BUDGET HOMES CAN NOW HAVE THESE LUXURY ADVANTAGES

RADIANT WARMTH · DRAFTLESS WARMTH · CONTROLLED WARMTH

MORE HOT WATER FOR KITCHEN, BATH AND LAUNDRY

Yes, forced hot water heat with a TACO circulator gives all this *plus* economical warmth. No need for a separately fired water heater. TACO TANKLESS, hooked up to a heating boiler, supplies year 'round *low cost* hot water.

The TACO circulator delivers heat where it will give the greatest comfort . . . whether you use radiant panels, convectors, radiators or baseboards.

ARCHITECTS—ENGINEERS WRITE FOR . . . SIMPLIFIED SELECTION CHART FOR SIZING TACO WATER HEATERS UNDER ANY CONDITIONS.

Three other famous TACO PRODUCTS for houses

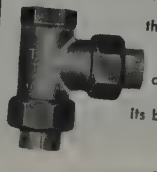
TACO-VENT

eliminates air from hot water radiation automatically

TANKLESS TACO

gives an abundant supply of hot water instantly. No need for storage tank.

TACO TEMPERING VALVE



thermostatically mixes hot water with cold so there's no danger of its being too hot.

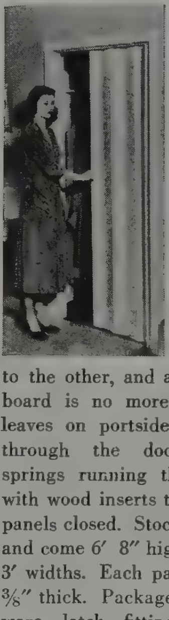
Better Heating-
Better with Taco

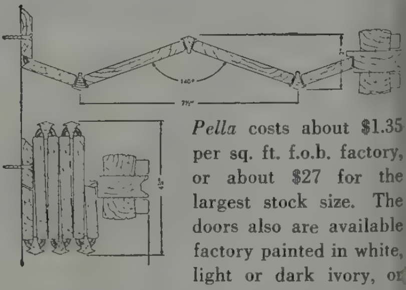
Taco

TACO HEATERS, INCORPORATED · 137 SOUTH STREET · PROVIDENCE 3, R. I.

WOOD ACCORDION DOOR. Concealed springs prevent seam peeposis

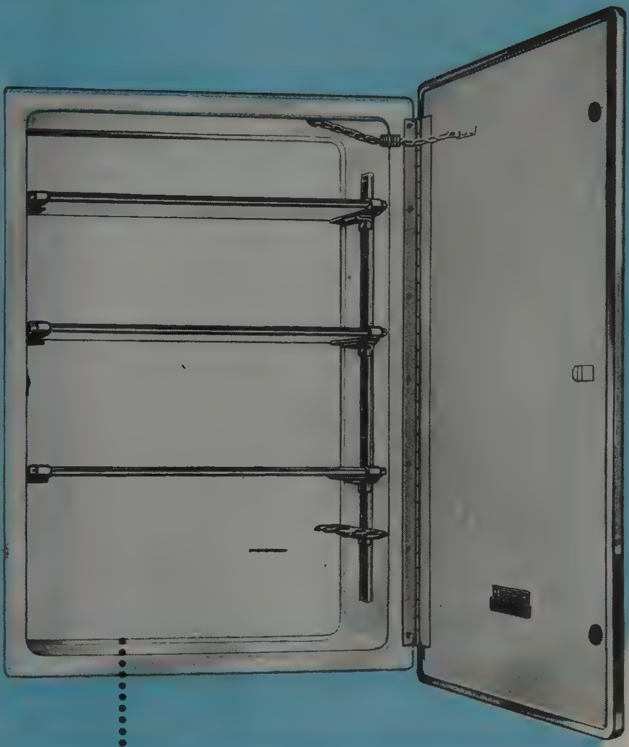
Opening from a compact stack against a 4″ jamb, the *Pella* wood-folding door makes an efficient and attractive room divider, storage wall closure, or passageway door. Used to separate dining from living or nursery from nurse, the *Pella* substantially reduces sound transmission from room to room. In tests conducted at the Riverbank Acoustical Laboratories the new product was found to retard noise by 18 decibels; i.e., a lusty radio oration on one side of the *Pella* becomes quite subdued when it comes through to the other, and a quiet *tête à tête* on starboard is no more disturbing than rustling leaves on portside. Light, also, cannot get through the door. Chrome-plated steel springs running the full door width work with wood inserts to keep the cracks between panels closed. Stock models are made of pine and come 6′ 8″ high in 2′-4″, 2′-6″, 2′-8″, and 3′ widths. Each panel measures 3⅝″ wide x ⅜″ thick. Packaged with all necessary hardware—latch, fittings, and overhead track—and sanded ready for finishing on the job, the *Pella* costs about $1.35 per sq. ft. f.o.b. factory, or about $27 for the largest stock size. The doors also are available factory painted in white, light or dark ivory, or with a coat of clear varnish. Units will be made to specifications in widths up to 20′-6″ and heights up to 12′. These custom doors may be ordered in paint or varnish grades (pine) at about $1.60 per sq. ft. or with





(Continued on page 146)

PERMANENCE



PERMANENCE is an important feature to consider in the selection of a bathroom cabinet when building or remodeling.

And it is the PERMANENCE of the interior finish that makes Hall-Mack bathroom cabinets the ideal choice for every bathroom.

Hall-Mack Porcelain Cabinets are drawn from a single sheet of iron and three coats of vitreous porcelain enamel are furnace-fused to the seamless interior. Better quality refrigerators, stoves, and lavatories are all finished in porcelain. Porcelain-on-iron is the most enduring and beautiful finish ever developed for bathroom cabinets—it's easy to clean...completely sanitary...it's a lifetime value!

HALL-MACK®

the BEST answer to

QUALITY BATHROOM ACCESSORIES

The Porcelain-on-iron lifetime interiors give Hall-Mack cabinets a fresh, sparkling beauty that is ageless! This is but another example of Hall-Mack quality... another reason why Hall-Mack is the only answer to Quality Bathroom Cabinets. A Hall-Mack cabinet has every quality feature than can be desired in a fine bathroom unit. All trim is chrome plated... all mirrors are plate glass...and bulb edge glass shelves are fully adjustable. It blends perfectly with today's modern bathroom design!

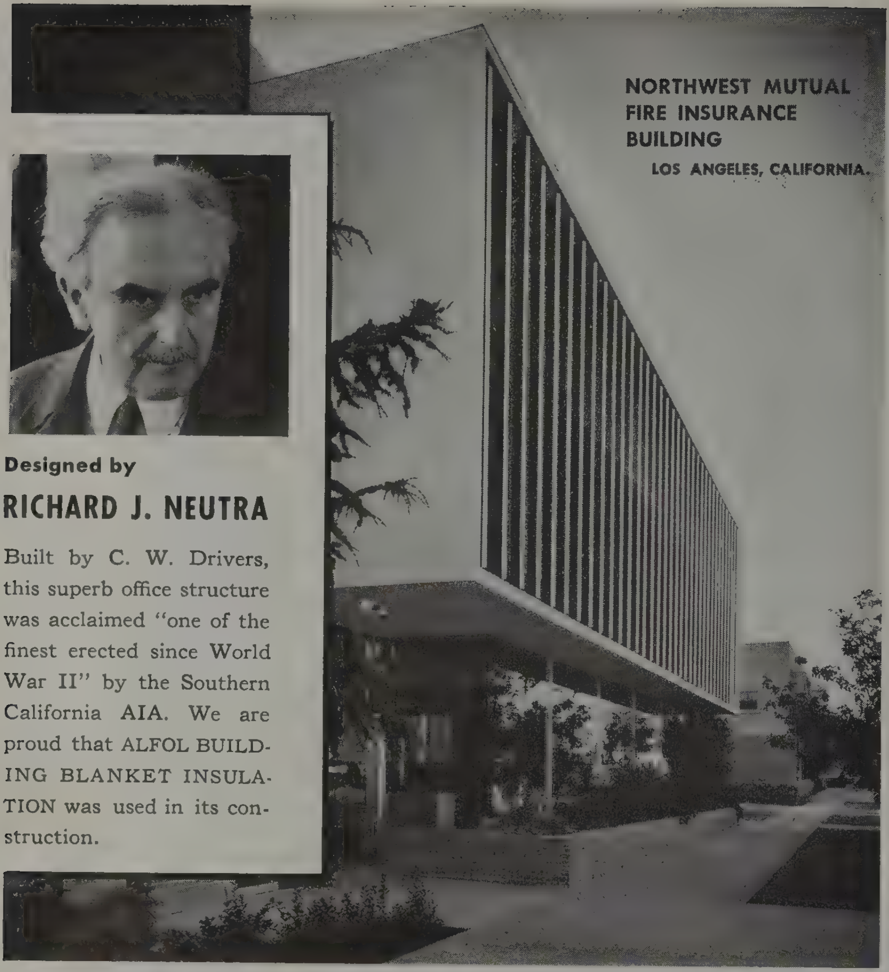
Mirror sizes 16 x 22 to 18 x 26...
Fluorescent or Lumiline lighting...
or without lighting

HALL-MACK COMPANY

1344 W. Washington Blvd., Los Angeles 7, California
7455 Exchange Ave., Chicago 49, Illinois

HALL-MACK®
Quality
ACCESSORIES
For Every Bathroom Style and Budget

Sold by leading plumbing, tile and hardware dealers everywhere.



NORTHWEST MUTUAL FIRE INSURANCE BUILDING
LOS ANGELES, CALIFORNIA.

Designed by

RICHARD J. NEUTRA

Built by C. W. Drivers, this superb office structure was acclaimed "one of the finest erected since World War II" by the Southern California AIA. We are proud that ALFOL BUILDING BLANKET INSULATION was used in its construction.

ANOTHER ALFOL *Installation*

Now, for commercial and residential construction alike, more and more leading architects are specifying ALFOL BUILDING BLANKET Insulation. Compact, lightweight, permanent, ALFOL does two jobs in one. Its pure aluminum foil surfaces instantly and continuously reflect 95% of all radiant heat. And ALFOL, because it is applied in a continuous length across the stud faces, provides the finest vapor barrier obtainable—at any price.

REMEMBER ONLY ALFOL HAS BOTH THESE GREAT FEATURES

1. Suspended aluminum foil sheets providing multiple reflective air spaces.
2. Heavy water-proof duplex backing for continuous moisture protection and positive application support.

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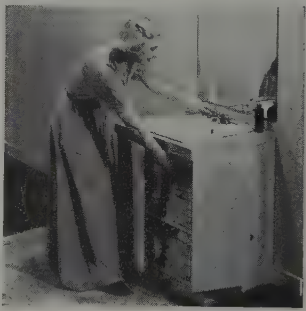
hardwood veneers (oak, birch or Philippine mahogany).

Manufacturer: Rolscreen Co., Pella, Iowa

CABINET LAVATORIES tailored for contemporary baths or dressing rooms

Furnishing useful storage space, a cosmetic-proof dressing table, and built-in wash basin, Kohler's new cabinet-lavatories combine practicability with clean styling. The cabinets are wheat-colored laminated wood and have a semigloss hard finish which is reportedly resistant to most medicines and bathroom cleaning compounds. Both the double and single cabinet models are topped with plastic in a subtle coral, gray, sand or green pattern. The doors spring open under light finger pressure and have concealed hinges which do not protrude beyond the width of the cabinet. (The units can therefore be installed directly next to the wall in a recess or alcove.) The larger double cabinet has a 4″ integral backsplash, and is 42″ long and 22″ wide; the smaller is 27″ by 22″. Both stand 30″ high and are available with either the *Tahoe* enameled cast-iron lavatory or the *Arrowhead*, made of vitreous china. Each basin measures 20″ x 18″ and is fitted with a flush steel frame.

Manufacturer: Kohler Co., Kohler, Wis.



The combination dressing table and lavatory is a utilitarian and handsome bathroom accoutrement.

SMALL SQUARE TUB. Hoizontal bathers fit in on the bias

Affording tub bathing in a nook usually allotted a stall shower, the *Restal* makes good design sense on a tight plan. As a bath for the average one-bathroom house or as the second bath in a larger home, the new 37″ x

(*Continued on page 152*)

"WOOSTER"
Hollow Steel
DOORS and FRAMES

Like hundreds of other well designed, carefully specified housing developments across the country, the 318 unit Quincy Manor features USF "Wooster" Hollow Steel Doors and Frames. Architects favor the matching design available in the Wooster Door from corridor entrance doors to swinging or sliding closet doors. Builders appreciate the quick installation and owners value the permanence and low maintenance they assure. Provide the USF "Wooster" Door advantages to your clients in your next specification.

Typical USF "Wooster" Corridor Entrance Doors with interviewers.

See Us in Sweet's

USF
Reg. U. S. Pat. Off.

United Steel Fabricators, INC.

WOOSTER, OHIO

Manufacturers of: Hollow Metal Doors and Frames • Pre-fabricated Metal Buildings • Corrugated Metal Window Wells • Highway Guard Rail • Structural Plate Bridge Flooring • Corrugated Metal Pipe

EXTRA that makes a house EASIER TO SELL!

IT'S A PACKAGE! Everything needed arrives on the job as a complete unit. Including automatic ceiling shutter, from $154.93*, retail.

What prospective home owner doesn't crave *built-in summer comfort?* The lady of the house looks to cooler, more pleasant days. The man grins at the thought of solid sleeping comfort on hot summer nights. Nothing you can offer gives more lasting pleasure. Nothing does more to make the sale. In terms of the selling influence it wields, the cost of an R & M "Package" Attic Fan is low indeed.

Easy installation. R & M "Package" Attic Fans with certified air deliveries of 4750 and 6800 CFM cut installation costs to the bone. Fan simply sets over roughly framed opening, no finishing needed. Rubber cushion seals fan frame to ceiling opening. Ceiling trim is part of complete automatic shutter assembly. Also available in easy-to-install sizes up to 16,000 CFM.

Ideal for low attics and all standard hallways. Perfect for "moderns" with limited attic clearance. Quiet, too. Moving parts are rubber-mounted. Factory-lubricated, sealed ball bearings on fan and motor. Fan guaranteed five years; motor and shutter, one year.

An informative, fact-filled booklet on R & M Attic Fans is yours for the asking. Send the coupon for your copy now.

S Consult Sweet's Architectural File for complete Robbins & Myers cooling and ventilating data.

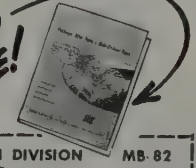
ROBBINS & MYERS

"Package" attic fans

Atlanta, Boston, Chicago, Houston, Kansas City,
Los Angeles, Minneapolis, New Orleans,
New York, Orlando, Philadelphia,
San Francisco, Springfield, Ohio

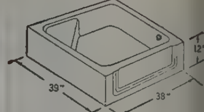
*Price subject to change without notice

IT'S FREE!



ROBBINS & MYERS, INC., FAN DIVISION MB-82
387 So. Front St., Memphis 2, Tennessee
Please send me your booklet—"Robbins & Myers Package Attic Fans, Belt-Driven Fans." A.I.A. File No. 30-D-1.
Name..
Address.....................................
City...................Zone......State.......

PRODUCT NEWS



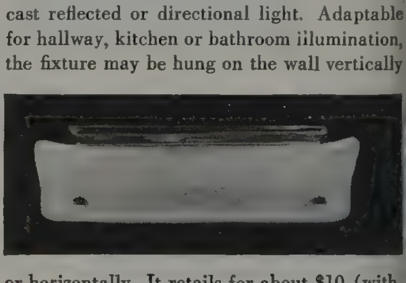
The compact Receptor may be used both as a regular bathtub and as a shower receptacle.

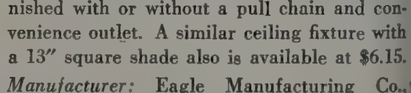
39″ unit permits the architect to think in terms of a complete and comfortable bathroom that will absorb only about 28 sq. ft. of costly floor space. Fabricated of cast iron (enameled white or any of five colors) the bath has an integral seat for foot bathing, and its diagonal tub recess will accommodate an adult reclining catercorner. Because of its wide flat bottom and low (1′) rim, the *Restal* can double as a receptor for a stall shower, thereby eliminating the usual lead pan construction. The bath costs from $134 to $160, depending upon the fittings and color selected.

Manufacturer: American Radiator & Standard Sanitary Corp., Pittsburgh 30, Pa.

WALL LIGHT has adjustable glass diffuser shade over chrome base

This inexpensive two-bulb bracket features a bent glass shade which can be swiveled to cast reflected or directional light. Adaptable for hallway, kitchen or bathroom illumination, the fixture may be hung on the wall vertically or horizontally. It retails for about $10 (without lamps) and its 16½ x 5¼″ glass shade comes in any of five pastel colors. It is furnished with or without a pull chain and convenience outlet. A similar ceiling fixture with a 13″ square shade also is available at $6.15.





Manufacturer: Eagle Manufacturing Co., 3508 Avalon Blvd., Los Angeles 11, Calif.

CHROME STAINLESS STEEL GUTTERS. Pretty, and they can be had

Free of government controls, rust resistant chromium stainless steel is one answer to the pinch on copper gutters and downspouts.

(Continued on page 156)

"Here's the ultimate in year 'round conditioning...with independent humidity control"

says S. H. Baldwin,

S. H. Baldwin and Company, Lubbock, Texas

"Recommending all-weather conditioning to a homeowner is like selling a man a Cadillac. While thousands will buy, all have to be sold on the *extra* values. That's where the Bryant All-Weather Conditioner fits into the picture! Not only does it control the temperature, but *closely* controls the *humidity*, too . . . a brand new development in residential air conditioning. With the Bryant it's even possible to *remove excess moisture* from the air *without lowering room temperature*. Completely automatic, the All-Weather Conditioner heats, humidifies, cleans and gently circulates the air when warmth is needed; also cools, dehumidifies (then reheats, if necessary) the air for summer comfort. Independent, automatic humidity control takes the Bryant out of the "me too" class of year 'round conditioning. Naturally, many other features have made Bryant tops in the field. If you want the *ultimate* in year 'round conditioning, get acquainted with the Bryant All-Weather Conditioner. Your Bryant distributor has the facts, or write Bryant Heater Division, Dept. 204, Affiliated Gas Equipment, Inc., 17825 St. Clair Ave., Cleveland, O.

BRYANT ALL-WEATHER CONDITIONER

Sizes 3- and 5-ton cooling capacity. Total heating input 150,000 BTU/Hr. in the smaller model, 200,000 in the larger size. Units available for electrical power from 208 to 230 volts, 1 or 3 phase 50 to 60 cycles. AGA approved and Underwriters' listed.

bryant® *best buy*

IN HEATING,
AIR CONDITIONING,
WATER HEATING

Home of Mr. & Mrs. George W. Walker
276 Bal Cross Drive
Bal Harbor, Florida

DESIGNER'S "DREAM HOME" PROVES DEPENDABILITY OF SOSS INVISIBLE HINGES

Architect: Dale Dykema
Ft. Lauderdale, Florida

GEORGE W. WALKER
INDUSTRIAL DESIGN

Gentlemen:

In the planning of my house in Bal Harbour, Florida I wanted the best material available and one of the prerequisites was Soss Invisible Hinges throughout the entire house.

In four years time there have been no squeaks or rust or sagging and I have substantiated my conviction that the Soss Hinges would withstand the salt air and damp weather of Florida by the Sea.

Yours very truly,
George W. Walker
GEORGE W. WALKER

"the hinge that hides itself"

SOSS INVISIBLE HINGES are built to last — *regardless of climatic conditions!* Also, because they have no protruding hinge butt, the Soss Hinge allows you to meet the demands of contemporary design for flush, crisp, streamlined surfaces. Two excellent reasons why architects, the world over, specify SOSS INVISIBLE HINGES whenever they build for the future.

Write for *FREE BLUE PRINT CATALOGUE* that gives complete details and the many uses of this *modern* hinge to . . .

SEE OUR CATALOG IN SWEET'S

SOSS MANUFACTURING CO.
21779 HOOVER ROAD • DETROIT 13, MICHIGAN
Dept. 1
A.I.A. File No. 27-B-1

PRODUCT NEWS

Corrosion resistant and easy to fabricate, chromium stainless steel is a practical material for roof drainage equipment.

Type 430 stainless, readily available to the building trades, currently is being marketed in a variety of standard size and shape items for roof drainage. Easy to fabricate, strong and durable, the lustrous metal gutters withstand heavy ice and snow loads without sagging and are not materially affected by temperature extremes. They are resistant to abrasion by soot, dirt and roofing gravel washing over the surface—an action that wears softer metals thin, especially in valleys and elbows. Available in bright or burnished finishes, chrome stainless' neutral color blends well with other construction materials. Costs run about 50¢ per lin. ft. for the 5" half-round gutter and 65¢ for the 6". Leaders are made in 3, 4, and 5" sizes in plain round, round and square corrugated and sell for about 50¢ to 95¢ per lin. ft.

Information: Committee of Stainless Steel Producers, American Iron & Steel Institute, 350 Fifth Ave., New York 1, N. Y.

BETTER BX. Smaller through the middle, less weight all around

In a modest announcement from Bridgeport last month came news that G. E. has improved that *sine qua non* of building materials, BX cable. Utilizing rot-resistant glass braid (which permits a thinner cord than the customary cotton) in its cable sizes 14 to 10 Awg, the manufacturer has reduced the diameter and, consequently, the weight of the armored line. Easier to carry and maneuver through drill holes, the new type can be used with all standard electrical fittings, and is listed by Underwriter's Laboratories, Inc., Price, .06 to .09¢ per lin. ft., is about the same as the regular wire.

Manufacturer: General Electric, Construction Materials Div., Bridgeport 2, Conn.

(Continued on page 160)

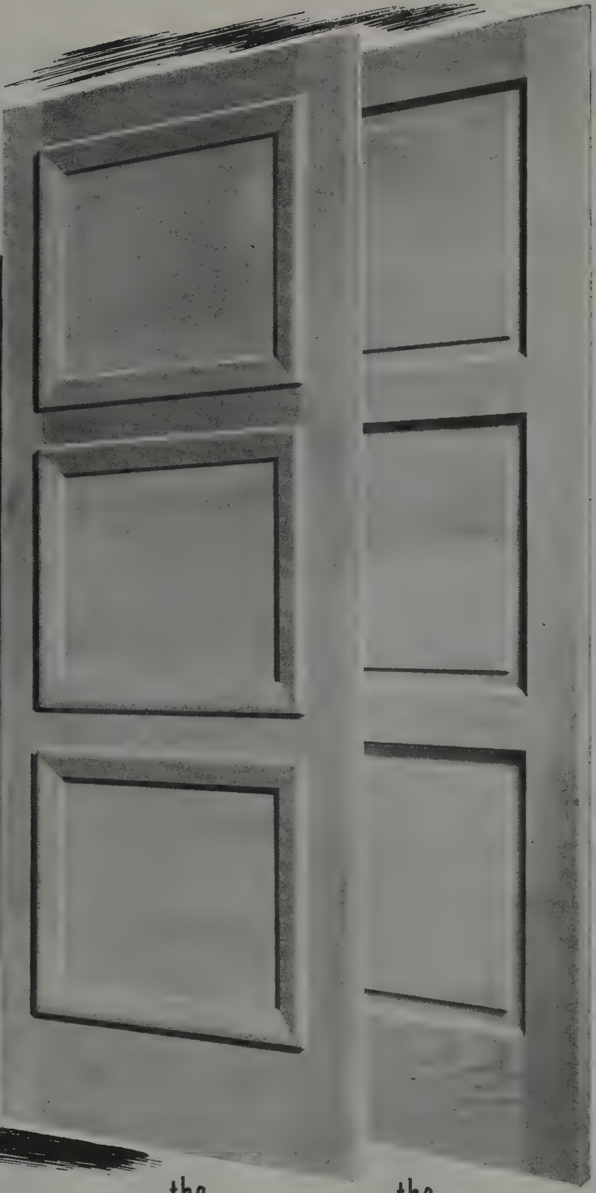
2 new BILT-WELL DOORS

FOR CONTEMPORARY AND
RANCH TYPE HOMES

OPEN UP...

NEW DOOR SALES POSSIBILITIES

with these beautiful doors designed and built to meet the exacting demands of today's home owners for elegance and lasting, satisfying service.



Nationally advertised Bilt-Well Doors—designed to CREATE new business, quick sales and to realize larger PROFITS!

The demand for beautiful doors to fit the homes of today has been constantly increasing. Here are two new doors to meet your customers' demands—doors that are architecturally correct for Contemporary homes . . . doors are made of properly kiln-dried Ponderosa Pine, accurately machined and sturdily constructed.

Write us for literature and name of nearest supplier.

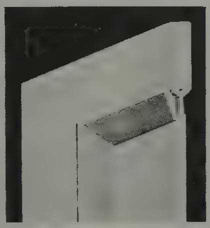
Build Well with
BILT WELL
WOOD WORK

MEMBER
Ponderosa Pine Woodwork

CARR, ADAMS & COLLIER, CO. *Dubuque, Iowa*

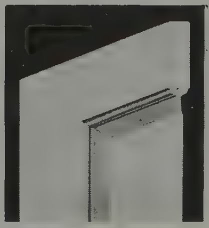
Here's a list of the Bilt-Well line ● *Superior Unit Wood Windows* ● *Nu-Style & Multiple-Use Cabinets* ● *Carr-dor Garage Doors* ● *Combination Doors* ● *Screens & Storm Sash* ● *Basement Unit Windows* ● *Shutters* ● *Exterior Doors* ● *Interior Doors* ● *Entrances* ● *Louvers & Gable Sash* ● *Corner China Cabinets* ● *Ironing Board Cabinets* ● *Mantels* ● *Telephone Cabinets* ● *Stair Parts*

the Hacienda



Mitered and packaged moulding is available to convert the "Rancho" door to the "Hacienda" door. The moulding is simple to apply around the panels—either on one or both sides of the door.

the Rancho



A close-up view of the new "Rancho" door (showing top rail and stile, beveled and raised). Heavy (9/16" thick) solid panels cast a shadow and accentuate the beautiful contour of the door.

Silent Salesman for Your Homes

Chrysler Airtemp

Comfort Zone

Residential Year-'Round Air Conditioner

HEATING • AIR CONDITIONING

Home buyers look for the plus features in a house—and year-'round Comfort Zone Air Conditioning is a most potent sales point. In your budget homes, install a Chrysler Airtemp Comfort Zone heating system, then the purchaser can later install a Chrysler Airtemp "Packaged" Air Conditioner for summer cooling. With Chrysler Airtemp year-'round equipment, you can offer this added attraction complete for less than 25c a day, when included in the mortgage. Remember, Chrysler Airtemp is the FIRST "Packaged" Air Conditioner with a Sealed Radial Compressor which carries a five-year warranty!

AIRTEMP DIVISION
OF CHRYSLER CORPORATION
DAYTON 1, OHIO

Airtemp Division, Chrysler Corporation H&H-8-52
P. O. Box 1037, Dayton 1, Ohio

Please send me details about Chrysler Airtemp residential heating and air conditioning.

Name ____ Phone ____
Address ____
City ____ Zone ____ State ____

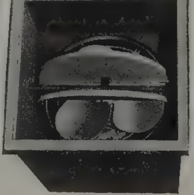
SEE THE YELLOW PAGES FOR THE NAME OF YOUR NEAREST DEALER

AIR CONDITIONER with big cooling and heating capacities made for large home

As evidence of its faith in the future of residential air-conditioning units (see H&H, June '52) Carrier has come out with a big one. This new model 38B8 Weathermaker has a cooling capacity of 7½ tons and an hourly heating input of 150,000-190,000 Btu's. Providing dehumidification as well as cooling during the summer, and filtration all year round, the packaged unit takes up a floor space of 43" x 5' and stands 70" high. It may be recessed in a closet with only the removable front panels accessible for servicing. The model sells for about $2,000, not installed. *Manufacturer:* Carrier Corp., 300 S. Geddes St., Syracuse 1, N. Y.

ATTIC FAN housed in dummy chimney

A novel exhaust fan, the Cook packaged unit, sets inside a steel chimney on top of a roof. It takes up no usable room space and, employing the entire attic area as a plenum, eliminates the need for large louvers. Its self-draining housing has a protective vinyl coat and the interior also has a sound absorbent coating which muffles the whir of the 18" direct drive 3,300 cfm fan. The chimney may be cut on the job to fit the roof slope, or can be ordered factory cut to the right pitch. Retail price for the new Cook fan unit is $150. *Manufacturer:* Loren Cook Co., Berea, Ohio



(Technical Publications page 166)

PRECISION

the only attic stairway equipped with

ROLLER BEARINGS

Life time, factory packed ROLLER BEARINGS make raising and lowering stairway practically effortless.

Precision Parts Corporation, not content with the smoothest and easiest operating stairway on the market, equipped their Precision Folding Stairway with roller bearings for still smoother and easier operation. Actuated by counterweights which operate on these bearings the stairway is practically 100% free of friction and all but raises and lowers itself.

OTHER OUTSTANDING FEATURES

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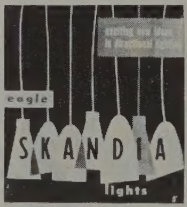
TECHNICAL PUBLICATIONS

LIGHTING FIXTURES. Eagle Skandia Lights. Eagle Manufacturing Co., 3508 S. Avalon Blvd., Los Angeles 11, Calif. 8 pp. 8½″ x 11″.

Announcing a new line of lighting fixtures, this illustrated brochure describes 48 metal accent lights which are designed for wall and ceiling mounting, and are adjustable for either direct or indirect lighting. The models are available with any of four different shaped cones finished in aluminum, copper, or brass-colored lacquer.



BATHROOM FIXTURES. UR Bathroom Fixtures and Kitchen Equipment. Universal-Rundle Corp., Dept. HOC, New Castle, Pa. 20 pp. 8½″ x 11″.

A neatly styled group of lavatories, water closets, bathtubs, and kitchen sinks is illustrated in this two-color booklet. Dimensioned line drawings are also included.

WATER SOFTENER. Permutit Electro-Matic Home Water Softener, Bulletin 3637. The Permutit Co., 330 W. 42d St., New York, N. Y. 6 pp. 8½″ x 11″.

Describing a new line of water softeners for residential use in areas where the water has a high mineral content, the bulletin notes several economic advantages for the units.

PLASTIC PANELS. Resolite Translucent Structural Panels. Resolite Corp., Zelienople, Pa. 12 pp. 8½″ x 11″.

This booklet pictures translucent plastic panels in many structural applications. Fabricated of polyester resins reinforced with glass fibers, the panels are described as being practical for skylighting, room partitions, and shower stalls. The publication gives specifications, loading and light transmission values, and lists colors available. Tables itemize the complete range of standard sheet widths and lengths and corrugation sizes. Accessories—corrugated molding and filler strips, sealing mastic and flashings—are also illustrated and described.

LUMBER. Schedule of Publications, Western Pine Assn., Dept. S. P. Yeon Bldg. Portland 4, Ore. 16 pp. 8½″ x 11″.

A listing of current literature on wood in construction, the *Schedule* itemizes 99 publications and briefly describes their contents.

(Continued on page 168)

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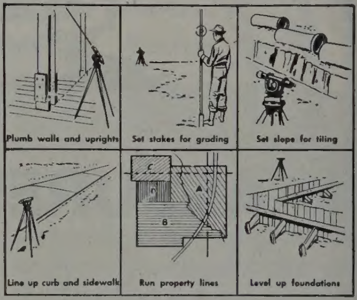

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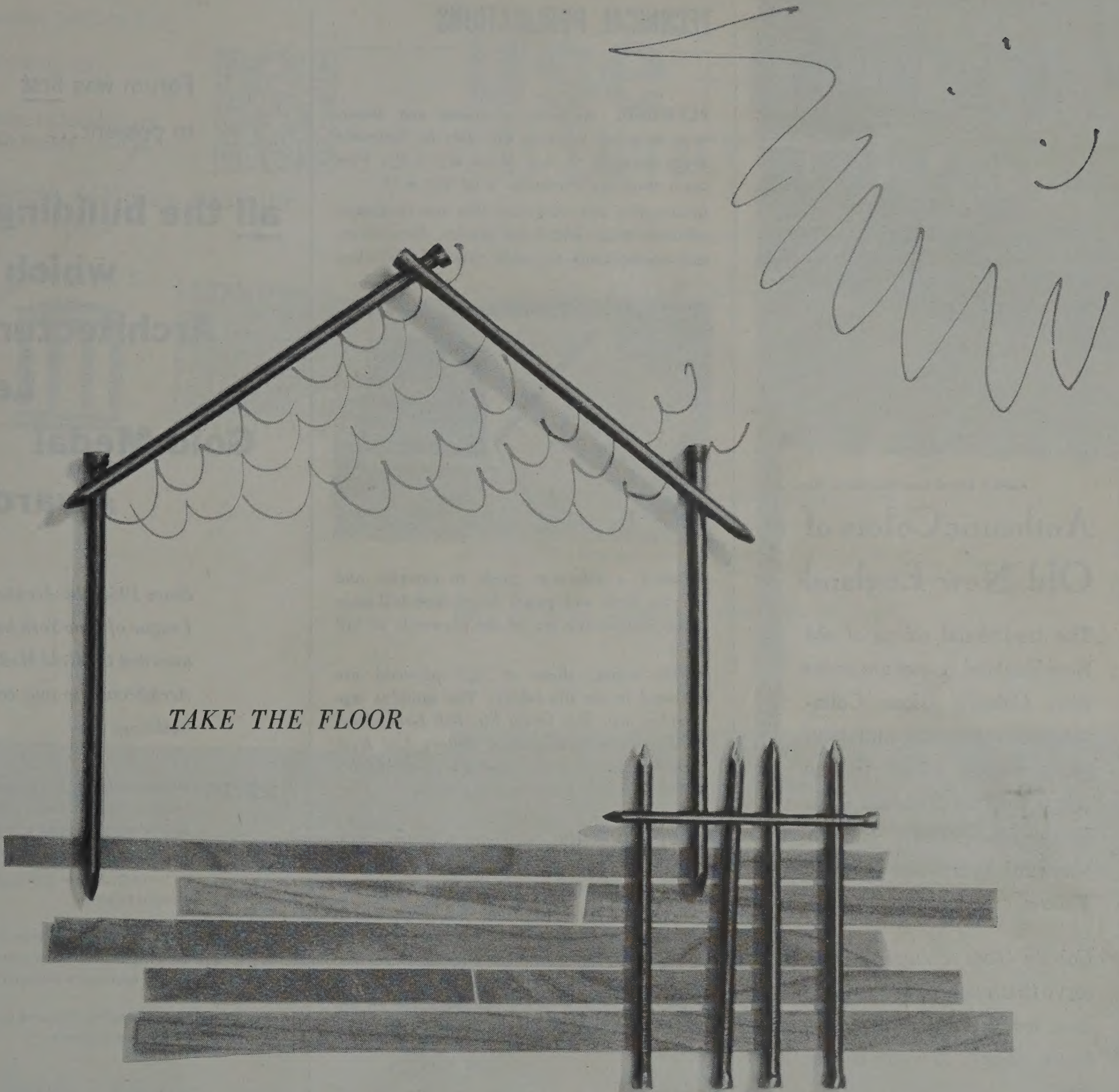

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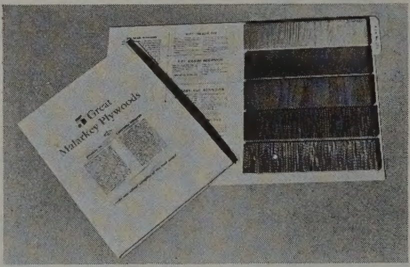
TECHNICAL PUBLICATIONS

PLYWOOD. Malarkey Plywoods and Doors. M & M Wood Working Co., 2301 N. Columbia Blvd., Portland 17, Ore. 58 pp. 8½" x 11". Five Great Malarkey Plywoods. 4 pp. 8½" x 11".

Informative and attractive, this new catalogue contains tables which list grades, dimensions, and applications for each type of Malarkey plywood, a selection guide to exterior and interior flush and panel doors, and full-page plates illustrating ten of the plywoods in full color.



Five actual slices of ¼" plywood are mounted in the file folder. The samples represented are: *Rift Grain Fir, Rift Grain Redwood*—two vertical grains, *Rotary Cut Redwood*—a figured grain—and *Redwood* and *Fir Plyweave*—two embossed plywoods.

WOOD PANELING. Sea Swirl. Associated Plywood Mills, Inc., Box 672, Eugene, Ore. 16 pp. 9" x 6".

Sea Swirl decorative plywood is described in this booklet as being light, durable, splinterproof, and easy to apply. Processed so that the soft growth on the Douglas Fir face is removed, the new wood paneling has an unusual deep-etched impression of its own rugged grain.

HEATING. New House Heating Comfort, Form JS183. Janitrol Div., Surface Combustion Corp., Toledo 1, Ohio. 4 pp. 8½" x 11".

Concise and informative, the bulletin explains how the *Janitrol Save-Way* forced warm-air system provides the comfort advantages of continuous air circulation by means of economical prefabricated 4" round ducts. *Save-Way* is said to save 35% on installation costs over conventional systems requiring custom sheet metalwork.

WALL PANELS. Marsh Products Architects' and Builders' Catalog. Marsh Wall Products, Inc., Dover, Ohio. 8 pp. 8½" x 11".

Up-dated to include the new *Marlite Hi-Gloss* wall panels, the full-color catalogue covers all the manufacturer's plastic-finished hardboard wall and ceiling panels, molding strips, and special adhesives. Featured in the publication are seven *Woodpanels*—silver walnut, blond mahogany, gray prima vera, natural walnut, striped mahogany, light oak, and natural prima vera—facsimiles of actual wood grains.

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